The Evolution of Air Mail Rate Making

Gilbert L. Gifford
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By GILBERT L. GIFFORD

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INTRODUCTION

The air transportation industry can be said to have attained maturity in the last ten years. Since it practically grew up during World War II, it reached a state in its development almost overnight that the railroads were nearly half a century in reaching. Since questions of extended and continuing growth are more the concern of national policy than a response to the demands for service, there is no direct parallel to be found in other public utilities to the development observed in air transportation.

With recognition from the beginning of how important air transport is to the postal service and national defense, it has been treated as an "infant industry" by means of the mail pay subsidy. It is this subsidy feature which obscures the problems of rate making and has caused the policy as set forth by the Congress and as interpreted by the Civil Aeronautics Board to be a distinct departure from the regulation of other forms of domestic transport.

On the subject of rate making, one would expect regulation by a new agency to follow the pattern set by the past experience in public utility and transportation law. It is rather surprising, therefore, to find the CAB in radical departure from the usual ideas concerning valuation and fair return when arriving at the rate making decisions. Perhaps an explanation is to be found in the statement of Judge Stanley when he said:

In adapting the general principles to the newest mode of transportation, it is not altogether "putting new wine in old bottles." Although the same principles must obtain and be applied, the law of aeronautics cannot be completely synchronized with the law pertaining to other agencies, for it must be modified to meet the traffic problems of the novel method.1

In many important respects, the rate determining characteristics of air transportation are unique. Since passenger rates developed in response to high costs, they were originally near the top of the measure "what the traffic will bear." Because these rates have shown a con-

1 Casteel v. American Airways, 88 S. W. (2) 976, 261, Ky. 818 (1835).
sistent downward trend since 1926 in the effort of the air carriers to
gauge the rate that would "move the traffic" by air in competition with
surface carriers, air rates have not been an object of public concern
in the way that railroad freight rates were under scrutiny at the incep-
tion of government regulation. Valuation and costs have therefore
not been given the consideration as a basis for passenger rates so much
as they have entered into computations concerned with the determina-
tion of air mail pay.

**Bases for Early Mail Rates**

In the earliest period rates of pay were set by contract bids which
were competitive only when more than one commercial operator was
prepared to offer the service. No attempt was made to base rates on
costs of operation. The first cost studies were made in 1929 and were
the bases for the Watres Act\(^{2}\) which set forth the mail pay formula con-
trolling for the years 1930 to 1939. Under the provisions of this act
an attempt was made to adjust rates of mail pay to differences in load
and operating costs by the application of increased compensation for
operating "variables" such as bad terrain, night flying and for special
features to encourage safe operation. There was no provision for the
determination of rates on the basis of cost experience and no use was
made of valuation as a rate determining factor. Though the Interstate
Commerce Commission was instructed by the Air Mail Act of 1934\(^{3}\)
to use costs in the determination of rates, in a decision handed down
in 1935\(^{4}\) the rate formula established by the Watres Act was continued.
This action of the Interstate Commerce Commission during the early
period in effect emasculated the rate provisions of the Act of 1934 and
negated the responsibility placed upon it by Congress, as its rate
making authority was little exercised.

Prior to the passage of the Civil Aeronautics Act\(^{5}\) in 1938, there
was no provision for the regulation of the rates charged by the air
 carriers for the transportation of persons and/or property other than
mail. Until 1939 transportation by air did not attract a large volume
of traffic, although passenger rates were steadily reduced. Fares were
halved between 1929 and 1932 in an effort to popularize travel by air
and volume did move steadily upward, increasing seventy fold in the
following eight years.\(^{6}\) But this early development was dwarfed by the
spectacular growth following World War II, bringing with it new
problems of rate determination. Prior to 1938, express and freight
shipments were not carried in significant volume and did not constitute
a rate problem such as they became after 1945. Lucrative air mail
payments in the period prior to 1938 may have dulled initiative but


\(^{3}\) 48 Stat. 1, 933 (1934). Known as the Black-McKellar Act.

\(^{4}\) 206 ICC 675 (1935).


\(^{6}\) Air Transport Association of America, Washington, D. C., *Air Transport
they did allow a high degree of competition in the establishment of passenger fares toward ever lower levels.

For several years following the transfer of authority to the Civil Aeronautics Board, this agency was not faced with a problem involving the relationship between the cost of providing the service and the air mail payments for that service. However, in 1942 the Board was called upon to determine a rate for the carriage of air mail based upon the cost of this service relatively free from subsidy element for a carrier which had developed profitable revenues from the transporting of passengers and express.

The Civil Aeronautics Act

The new act passed in 1938 gave the regulatory agency complete control over all air carrier rates, including air mail pay. The Board, accepting this responsibility, in a statement in one of the early cases outlined the task as one of determining a compensatory rate; one that would not violate the Federal Constitution by taking property without due process; as well as one that would conform to the Act itself, which charges that the rate be fair and reasonable.\(^7\) In clarifying the basic distinction between these two functions, the Board quoted the dissent of Justice Brandeis to the majority opinion in the case of the Southwest Bell Telephone Co. v. The Public Service Commission, in which he said:

The compensation which the constitution guarantees an opportunity to each is the reasonable cost of conducting the business. Cost includes not only operating expenses, but also capital charges. Capital charges cover the allowance, by the way of interest, for the use of capital, whatever the nature of the security issue therefore; the allowance for the risk insured, and enough more to attract capital. The reasonable rate to be prescribed by the commission may allow an efficiently managed concern much more.\(^8\)

There is a marginal field between the fair and reasonable rate as contemplated by legislative enactment and a barely compensatory rate which the Constitution requires. It is in this field that the discrimination and judgment of the administrative body must provide the incentive to management and the stimulus to pioneering initiative that is so necessary to a young and growing industry. The Board considered that this distinction had been neglected by other regulatory agencies.

The fact that regulatory commissions, confusing their function with the court’s function, have frequently adopted the standards of just compensation required by the Constitution as their guide in determining fair and reasonable rates, and thereby eliminated the margin between the compensatory rate and the reasonable rate, does not justify a repetition by this Board of a practice which, if there applied, would obstruct the fulfillment of the objectives of the Civil Aeronautics Act.\(^9\)

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\(^7\) Civil Aeronautics Act, Sec. 2; also, 3 CAB 733 (1942).

\(^8\) 262 US 276 (1923).

\(^9\) 3 CAB 323, (1942).
In a declaration aimed at further freeing itself from the inherited terminology and the reasoning of previous regulatory commissions and subsequent court decisions, the Board denied the validity of this experience and judgment.

This Board in exercising its rate making functions has never and does not now measure the reasonableness of the rate in terms of a fair return upon so-called “fair value” of the property used and useful in the public service. One of the primary factors which is frequently controlling, in determining the fair value of such property is its reproduction cost less depreciation. We believe that experience has proved such method to be administratively and economically unsound; its application to public regulated enterprise during the past four decades has placed upon state and federal regulatory agencies a burdensome, complex, expensive and futile task. Recent opinions of the members of the Supreme Court of the United States add to the weight of notable dissents by the members of the court in the past in further reducing the prestige of this rate-making formula.\(^{10}\)

Having stated its objective in determining a rate that is fair and reasonable under the Act, the Board continued an analysis of the standards set up for that purpose by the Act; an analysis which is useful in evaluating the current rate making policy of the Board.

First, the Act expressly directs the Board in fixing air mail rates to consider conditions “peculiar to transportation by aircraft and to the particular air carrier or class of air carriers”; it directs the Board to

\[... \text{take into consideration among other things} \ldots \text{the need of each such carrier for compensation for the transportation of mail sufficient to insure the performance of such service, and together with all other revenue of the air carrier, to enable such air carrier under honest, economical, and efficient management, to maintain and continue the development of air transportation to the extent and of the character and quality required for the commerce of the United States, the Postal Service and the national defense.}\]  

\(^{11}\)

In this interpretation of the law it was held that the federal policy preceding the passage of the Act as well as the legislative history, clearly revealed the significance of the mandate given the Board by the last sentence of this section of the Act. This was judged by the Board to mean that the “compensation” to be paid the air carrier was not merely reimbursement for a service performed but the use of the mail payments here was a statutory device to gain national objectives far above the interests of the postal service alone. Because of its intent to create a national air transportation system, the Congress inserted the carefully worded “need formula” in the Act to guide the Board in fixing air mail payments and it was this particular formula that led the Board to disregard the traditionally accepted standards of public utility rate making.

Section 406 (b), more than any other passage of the Civil Aeronautics Act, discloses the basic differences between the dual devel-

\(^{10}\) 3 CAB 770, 778 (1942).

\(^{11}\) Sec. 406. (b).
opment and regulatory objective of the ordinary statute designed for the control of public utility rates. This Board would not be able to approach soundly its rate-making function in disregard of this essential difference during the period the carriers are building to a position sufficient to enable them to accomplish these broad objectives without including payments therefor in the mail rates.\(^{12}\)

This would indicate that other methods would be adopted when a subsidy is no longer needed. In one of the early cases, the Board, faced with the determination of a rate for air mail pay in which no subsidy element was needed, appeared unprepared for the decision. It was pointed out that the law required the carrier to transport the mail if authorized to do so and that in return, the carrier was entitled to fair and reasonable rates for such service. There was also the requirement that the Government may not take property without due process of law, which condition would obtain if the rates were set too low.

This necessarily means that there is such a minimum rate for these (mail) services separately considered (i.e. apart from passenger and property transportation services) which must be determined by the Board. It is obvious that in order to reach such a determination we must exercise our judgment as to the proper amount of investment and operating costs properly allocable to the mail service, keeping in mind, however, that such allocated cost is but one of the considerations upon which a judgment may be formed as the fair and reasonable rate.\(^{13}\)

In this case, the examiner had recommended that investment and cost be allocated between commercial and mail service, but an absence of suitable records upon which to make this allocation made it impractical to attempt to make such an allocation so the Board arrived at what amounted to a “judgment” rate based upon over-all costs. In making this decision, the Board estimated that mail traffic would represent 11.3 per cent of the total traffic in pound miles. The portion of the total investment used in providing air mail service was therefore taken as 11.3 per cent, which was allocated to the air mail cost as well as a proportionate share of other expenses resulting in a total cost of 0.132 mills per pound-mile for mail transport.\(^ {14} \)

After thus determining the allocated cost for carrying the mail, the Board awarded a “judgment” rate of 0.3 mills per pound-mile because the payment was within the post-office revenues; airmail operation imposed special operating rigidities on the carrier; expected earnings from passenger traffic was .228 mills per pound-mile and there was no reasonable basis for making the mail rate less; and, the belief that mail pay should make its contribution to the trend toward decreasing cost of operations. It was also observed that this carrier had a record of exceptionally low costs attributable to a high standard of efficiency and economy and the profits accruing from this rate would be a reward

\(^{12}\) 3 CAB 323, 335 (1942).
\(^{13}\) 3 CAB 733, 754 (1942).
\(^{14}\) Ibid., p. 755.
to management. The Board advanced the theory that a fair and reasonable rate cannot be a mathematical conclusion.

The First "Service" Rate

The .3 mill rate made effective by this decision became the basis for "service" pay rates when, in 1946 the Board brought show cause order against the "Big Four" lines, Eastern, United, TWA, and American. The theory was advanced by the Board that all four lines were self-sufficient and that the service rate under which they were receiving payment was excessive. The factors considered and the policy expressed by the Board at this time formed the basis for a new rate more closely related to the cost of the service performed, but still containing elements of a "judgment" rate, according to the separate opinion of a dissenting Board Member, rather than being wholly a "service" rate.\(^{15}\)

As a basis for this decision, revenue and expense data for each company were collected and separated as to mail and non-mail, stated as totals in cents per revenue mile. Finally, the operating profit after taxes was found as a percentage of the required investment.

In the determination of what constituted the required investment, the following items were allowed:

1. Working capital; to be a part of the rate base, three months operating expense, exclusive of depreciation, was allowed.
2. Investment and special funds.
3. Flight equipment allowance; consideration was given to the factor of growth and allowance was made for equipment necessary to an expanding service.
4. Other operating property and equipment.
5. Long term operating property prepayments.\(^{16}\)

In its calculations, the Board started from the experience of the individual company for the previous year as found in its accounting records. Then adjusting these data to provide for future developments, allowing for growth, improved service, price changes and traffic conditions, an estimate of the desirable future financial structure was derived. However, this valuation was not used as a rate base but reference was made to it to show that expected revenue from the rate set would be adequate.

In using these data, the Board stressed the dynamic characteristics of the post-war period and their influence on cost allocation. It was held that:

Over-all costs provide a better basis for judgment in setting the air mail rates than allocated costs. Substantial over-all unit ton-mile costs would currently prevail if loads were reduced to a level consistent with good public service. Little basis exists for accurate estimates of the different categories of costs for new types of equipment soon to be available. Neither the magnitude nor the timing of changes in traffic loads can be forecast with confidence. With traffic loads reduced to generally satisfactory levels, the over-

\(^{15}\) 6 CAB 515, 559 (1946).
\(^{16}\) 6 CAB 581, 593, appendix 3. (1946).
all unit ton-mile costs which now prevail could be less than the average allocated unit ton-mile costs actually realizable over the entire transitional period, unless, in the meantime, sizeable operating economies are achieved by the air lines. We therefore conclude that no useful purpose will be served at this time by allocation of the over-all costs between the mail and non-mail services.\footnote{17}

In another case the Board repeated its criticism of the principle of “a fair return upon the so-called ‘fair value’ of the property used and useful in the public service” as the criteria of a reasonable rate.\footnote{18}

When this viewpoint was first announced by the majority of the Board, one member disagreed, maintaining:

\ldots that mail rates (should) be based on an allocation of expense and investment between mail and commercial services and that the mail rate which was established should compensate the carrier for the cost of the mail services so determined plus a 15% net return on the investment allocated to mail service. Taking into consideration the difficulty and errors of forecasting and the possible imperfections in the method of allocating expense and investment a 15\% net return might actually earn close to 10\% net return on his mail investment, a return which appears reasonable to me.\footnote{19}

In accepting the new lower rate adopted at the close of the war, this dissenting Member held that it still contained elements of subsidy and that it retained many features of a “judgment rate \ldots a rate that is based substantially on non-cost considerations.”\footnote{20} He indicated that he considered the uniformity in application of the rate as desirable in the transitional period for the following reasons:

I interpret the Board’s present action as basing the present service mail rate on standards broader than the operating results of a single carrier. Now that the war is ended, strict control over profits on the mail service of an individual carrier no longer stands as the factor of primary importance. It must be considered relatively with the factors of stimulating and rewarding the carriers to undertake new services and to persist in bringing additional economy and efficiency into their operations. To this end it appears desirable to retain uniformity in mail rates for service carriers, particularly at a time when there is not only substantial uniformity in the service performed for the Post Office Department but when much of the air transport service now being offered is highly competitive. \ldots It should be noted, however, that consideration of broader standards than operating results of an individual carrier does not in itself invalidate the use of costs as a proper basis for establishing service mail rates. Instead it would seem that when the Board broadens its considerations to include a group of carriers attention would shift from the reasonable cost of individual carriers to the reasonable average cost of the group of carriers as a whole. If a uniform service mail rate is established to provide fair and reasonable return in relation to the average costs of a group of carriers the net return to each carrier would depend upon its per-

\footnotesize
\begin{itemize}
\item \footnote{17} 6 \textit{CAB} 387 (1946).
\item \footnote{18} 7 \textit{CAB} 387 (1946).
\item \footnote{19} 4 \textit{CAB} 23, 51 (1944); Member Harlee Branch.
\item \footnote{20} 6 \textit{CAB} 551, 559 (1946).
\end{itemize}
formance relative to the performance of the other carriers within
the group.\textsuperscript{21}

The Board was cognizant of the danger that a non-cost rate under
conditions of presumed self-sufficiency might establish a precedent and
denied any intention "to either endorse or enunciate any new phi-
losophy or long range principle of rate making." The announced
purpose was to provide security "against risks inherent in the dynamic
and uncharted transitional period ahead."\textsuperscript{22}

The rate provided at that time, that was estimated to return more
than 15 per cent on the required investment, soon proved insufficient
as the transitional period proved too dynamic for the estimate. In the
following year two of the four lines declared to be self-sufficient showed
substantial losses\textsuperscript{23} and in 1947, Eastern was the only major domestic
line to show an annual profit.\textsuperscript{24} It was well that the mail rate estab-
lished in 1946 had been set on a temporary basis. Though non-cost
considerations had been the prominent factors in air mail rates, the
tendency had been to keep the determination of a reasonable rate
flexible; open to adjustment as conditions changed. The initiation of
procedure of adjustment is the privilege of either the carrier or the
Board, whichever may feel the burden of an inequity. There had been
some demand that a permanent rate be established and a later decision
which brought revision of the ton-mile rate of 45 cents was a move in
that direction.

\textit{Self-sufficiency}

Developing the theory, expressed in a previous decision, that the
reasonable rate for the self-sufficient carrier is a service rate and not
a need rate, the Board stated the opinion that five large domestic
carriers, Eastern, United, American, TWA, and Northwest were self-
sufficient as that term was defined by the Board. They had attained

\ldots that state in the carrier's economic development at which
under honest, economical, and efficient management, the volume
and character of non-mail services required in the public interest
may be fully supported by the revenues derived from such services
under fair and reasonable rates to the public.\textsuperscript{25}

Seven areas in which self-sufficiency must be attained were suggested
by the Board:

(1) Technological development sufficient to permit safe and reliable
operation at cost commensurate with the value of service.
(2) Public acceptance of air transportation sufficient to insure
effective demand at reasonable prices.
(3) Value of service sufficient to insure large-scale demand.
(4) Capital sufficiently available to permit the realization of maxi-
mum market potential.
(5) Sufficient volume to reduce unit costs.

\textsuperscript{21} \textit{Ibid.}
\textsuperscript{22} \textit{CAB} 581, 587 (1946).
\textsuperscript{23} \textit{American Aviation}, May 1, 1947, p. 18.
\textsuperscript{24} \textit{Ibid.}, May 1, 1948, p. 44.
\textsuperscript{25} \textit{CAB, Order Serial Nos. E-1351-1355 incl.,} March 29, 1948.
(6) Traffic density sufficient to permit a high degree of utilization.
(7) Sufficient volume and traffic density to allow economic utilization of modern and efficient equipment. ²⁶

Carriers in advantageous circumstances in these seven characteristics are obviously able to sustain a profitable level of income without government subsidy. The Board considered that since the five carriers under examination had, in its opinion, attained self-sufficiency there also existed a condition of comparability between them that had been observed in a previous case. As further tests of this theory, the Board tabulated the basic operating characteristics, classified as to size and volume factors, density and plant utilization factors, and operational factors. The experience of the five carriers thus analyzed led the Board to the conclusion that in the relationship of the cost factors considered, the carriers were also comparable. Any differences that did exist were thought to be the result of

... management decisions for which the stockholders should properly hold management responsible. ... It would be manifestly inequitable to the public interest, however, to use the mail pay as a means of equalizing the current earnings of carriers by establishing different individual rates, if on the basis of similar management approaches to current operating problems, the opportunities for earning reasonable profits were approximately equal under uniform mail rates. ²⁷

Consequently, the Board held to its previous declaration in favor of a uniform rate of mail pay but evolved a new formula, to be uniformly applied, that provided for a lower ton-mile rate to be effective as volume increased. Under this formula the mail ton-miles carried each day were divided into eight increments. To the first increment of 0 to 2500 ton-miles the rate of 75 cents was applicable with lower ton-mile rates graduating downward to 40 cents per ton-mile applicable to each successive increment. This formula was advanced by the Board as a permanent solution to the rate problem but because the airlines were dissatisfied, the rates were made effective on a temporary basis pending the hearing of the objections. ²⁸

In this mail rate hearing, the Board can be seen as seeking a basis for a permanent rate and also increasing its attention to costs indicative of economy and efficiency of management as a vital factor. It did not want to sacrifice the gains of competitive activity by accepting as a basis of need the results of inefficient and uneconomic operations. In this objective it followed the direction of the Congressional Aviation Policy Board when it recommended that "the Civil Aeronautics Board should expedite the establishment of air carrier operating costs and efficiency yardsticks. ²⁹ There was every reason to believe that the responsibility of the Board as the watch-dog of public funds would

²⁶ Ibid.
²⁷ Ibid. The Board later used this principle to justify a low rate of return to some of the carriers.
increase as Congress moved to make effective the recommendations of numerous policy and co-ordinating reports each advancing the development of an air transportation system adequate to the needs of national defense, of the commerce and of the postal service.

**Retroactive Mail Rate Making**

The period between 1947 and 1950 was a difficult one for the air lines and for the Civil Aeronautics Board. It was a period of sharp contrasts in the reported earnings of the Big Four carriers, as well as the domestic air transport industry as a whole. The high profits of the postwar period failed to materialize until 1950 and the tremendous growth that had been expected did not entirely come. Late in 1946 most of the industry experienced a downward trend in traffic, although the traffic of the Big Four continued upward long after that of the others had started down and the reappearance of seasonal fluctuations reminded the operators that the war was over. During 1947 and 1948 it was necessary for the Board to give all of the trunkline carriers increases in their previously established mail rates because of the economic situation and even the Big Four received increased rates on a temporary basis.

Business conditions began to improve in 1949 so that the fiscal year ending in June 1950 proved to be the biggest that the Big Four had ever had. Earnings and traffic growth proved to be very good in 1950 due, in part, to the outbreak of the war in Korea.

Because of the variations in traffic and revenues and the greatly increased demand for government aid on the part of the whole industry, the Board started an investigation concerning the finances, routes and operations of the Big Four and, since it had decided to set final mail rates, the two investigations were combined.

In addition to the impact of changes in passenger volume on the financial condition of the Big Four Group, the following factors briefly highlight some of the significant problems and developments which had a pronounced effect on the reported earnings and financial requirements of various carriers:

1. Inflationary pressures on various airline costs;
2. The very substantial costs of integrating new types of equipment;
3. The costs related to the grounding of the Constellation and DC-6 aircraft types;
4. The increased costs of expansion of services and facilities;
5. Service to numerous small cities which had not previously received air service or at which service was suspended during the war;
6. Marked improvements in the reliability of air service stemming principally from improvements in air navigation facilities and all-weather flying techniques;
7. Rapid growth of air freight volume and initial decline in mail volume followed by later growth, particularly after the inauguration of air parcel post service, and more recently, the effect of the mobilization program;
(8) Increases in the basic passenger fare level, together with the development of a series of promotional passenger fares, including the family-fare plan, round trip discounts, coach, and excursion fares;

(9) The strengthening of the economic position of the Big Four resulting from replacement of equipment with modern transport types with lower ton-mile cost characteristics;

(10) The sharp growth of passenger volume since late 1948.30

As might be expected no two management groups would meet these problems in the same manner; planning for new equipment as to financing, time and type; personnel growth and training, and all the attendant problems of post-war expansion. These differences in managerial approach along with such major factors as the grounding of new equipment could easily account for some of the differences in earnings from one year to the next as well as the differences in earnings as between carriers. While many of the costs which were reported as current expenses were of a developmental nature, and helped depress the net earnings in 1947 and 1948, the same costs were at least partially responsible for the vastly improved net earnings in 1949 and 1950. All of this serves to point up the need for taking a long-range view in matters relative to rate determination.

This was the basis upon which the Board decided to look at the 1947-50 period as a whole rather than attempt to determine mail pay requirements for the Big Four on a yearly basis. In other words, the investigation was to determine mail pay for the period 1947-50 for each of the Big Four and also set final mail rates to begin in 1950 and to apply to the Big Four as a group. This rate subsequently was to be used as the service mail rate for all permanently certificated mail carriers. On July 31, 1951 the Board issued a show cause order to the Big Four proposing a rate of 63 cents per ton-mile from date of starting of proceedings for each carrier to December 31, 1950 and 45 cents per ton-mile thereafter.

The reported operating profits of the Big Four for the years in question, after mail pay at the established temporary rates, but before income taxes are summarized in Table 1. It is to be noted that Eastern was the only carrier to show a profit during the whole period and that the total net revenue reported by the four carriers varied considerably.

<table>
<thead>
<tr>
<th>Year</th>
<th>American (000)</th>
<th>Eastern (000)</th>
<th>TWA (000)</th>
<th>United (000)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1947</td>
<td>$-4,159</td>
<td>$ 2,860</td>
<td>$-4,428</td>
<td>$-5,204</td>
</tr>
<tr>
<td>1948</td>
<td>-1,482</td>
<td>5,360</td>
<td>672</td>
<td>-1,532</td>
</tr>
<tr>
<td>1949</td>
<td>9,842</td>
<td>3,944</td>
<td>2,596</td>
<td>4,976</td>
</tr>
<tr>
<td>1950</td>
<td>23,319</td>
<td>9,501</td>
<td>6,686</td>
<td>14,219</td>
</tr>
<tr>
<td>Total</td>
<td>$27,520</td>
<td>$21,665</td>
<td>$ 5,526</td>
<td>$12,459</td>
</tr>
</tbody>
</table>


After making adjustments believed desirable by the Board, the average returns on the average adjusted investments for the four years were: American 9.5%; Eastern 15.8%; TWA 4.0%; and, United 5.3%.\textsuperscript{31}

However, the proposed final rate of 63 cents per mail ton-mile was less than the temporary mail rate in force for each carrier during this period and so a calculation showing the effect upon operating results and rates of return with the 63 cent rate in place of the temporary rate produced the return shown in Table 2.

**Table 2 — Operating Profits—Big Four—Based on Proposed 63 Cent Mail Rate Before Income Taxes**

<table>
<thead>
<tr>
<th>Year</th>
<th>American</th>
<th>Eastern</th>
<th>TWA</th>
<th>United</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(000)</td>
<td>(000)</td>
<td>(000)</td>
<td>(000)</td>
</tr>
<tr>
<td>1947</td>
<td>$-4,159</td>
<td>$ 3,169</td>
<td>$-3,614</td>
<td>$-4,431</td>
</tr>
<tr>
<td>1948</td>
<td>-1,542</td>
<td>5,148</td>
<td>-1,509</td>
<td>-4,150</td>
</tr>
<tr>
<td>1949</td>
<td>9,661</td>
<td>3,776</td>
<td>2,411</td>
<td>5,087</td>
</tr>
<tr>
<td>1950</td>
<td>23,364</td>
<td>9,286</td>
<td>6,579</td>
<td>14,714</td>
</tr>
<tr>
<td>Total</td>
<td>$27,324</td>
<td>$21,379</td>
<td>$ 3,867</td>
<td>$11,170</td>
</tr>
</tbody>
</table>


On the basis of the data shown in Table 2 the adjusted operating incomes would provide an average rate of return before taxes for the four carriers of: American 9.4%; Eastern 15.6%; TWA 2.8%; and, United 4.7%.\textsuperscript{32}

After deducting the actual income taxes from each carrier's reported operating income under the 63 cent ton-mile mail rate, the past period profits and rates of return after taxes were as listed in Table 3.

**Table 3 — Profit and Rate of Return—Big Four—After Taxes 1947-1950**

<table>
<thead>
<tr>
<th>Carrier</th>
<th>Income Taxes* (000)</th>
<th>Profit After Taxes (000)</th>
<th>Rate of Return After Taxes</th>
</tr>
</thead>
<tbody>
<tr>
<td>American</td>
<td>$11,958</td>
<td>$15,366</td>
<td>5.3%</td>
</tr>
<tr>
<td>Eastern</td>
<td>11,293</td>
<td>10,086</td>
<td>7.4</td>
</tr>
<tr>
<td>TWA</td>
<td>923</td>
<td>2,944</td>
<td>2.1</td>
</tr>
<tr>
<td>United</td>
<td>6,208</td>
<td>4,962</td>
<td>2.1</td>
</tr>
</tbody>
</table>


* It should be noted that the above tabulation excludes excess profits taxes paid by American in 1950, since such taxes should not be considered as reimbursable costs in the same way as normal income taxes are. It should be noted further, that the actual taxes reported by each of the four carriers for the years 1947-1950 have been reduced in the above tabulation to reflect the estimated tax credits resulting from the final past period mail compensation which involves a refund of temporary mail pay.

Before attempting to appraise the financial results and mail pay requirements of the carriers, the Board considered it necessary to make sure that the accounts of the carriers were consistent with the pre-

\textsuperscript{31} Ibid., p. 7.
\textsuperscript{32} Ibid., p. 9.
viously established rate making policies. The principal accounting adjustments that were felt desirable were the following:

1. The establishment of uniform bases for depreciation of flight equipment;
2. Capitalization and amortization of grounding costs, training and integration costs related to new types of flight equipment, and overhaul costs; and
3. The assignment of out-of-period items to the year to which such expenses relate.  

In adjusting the depreciation accruals as reported by the carriers the DC-6 and Constellation types were given a seven year life and residual value of fifty thousand dollars; the C-54 cargo and Convair 240 planes were also given a seven year life with twenty-five thousand dollar residual value; the DC-4 was given a four year life and the residual put at twenty-five thousand dollars. This adjustment was made only from the period of the institution of this proceeding and no adjustment was made to depreciation on the DC-3 equipment because of high obsolescence and the fact that most of this type of equipment had previously been fully depreciated. Training costs, pre-operating, and integration costs, treated by some carriers as current operating expenses and by others as capital costs, were amortized on a five-year basis with the exception of DC-4 training costs which were put on a three-year basis. There seems to be nothing here contrary to good accounting practice, but it would save the time of the Board and its staff if such standard accounting practices were included in the accounting rules set up for the carriers.

Because of difficulties experienced with new equipment, principally DC-6 and Constellation aircraft, the equipment had been grounded by the CAA for a period of time, causing heavy losses to the carriers involved. Eastern was the only one of the Big Four not involved in this grounding which presented a serious problem to the Board. It was decided that to the extent that the carriers had not been able to obtain reimbursement from the manufacturers, the grounding costs should be written off for rate-making purposes over a five-year period commencing with the date of general resumption of service with the particular type of equipment. It was also decided to treat the grounding costs for final rate purposes as a common cost of all services on a use basis, rather than as a specific and separate mail payment as was done in the case of temporary mail rates. The reasoning back of this was that if the carriers are found to be service-rate carriers, and not in the "need" class, the amortization of grounding costs would be allocated among the various types of service on an appropriate basis and since the 63 cent mail rate under consideration was not a service rate, there was no question concerning allocation to the mail service only.

In arriving at the costs relative to grounding of equipment for

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American, TWA, and United the Board constructed an estimate of the capacity which would have been operated and traffic carried had there been no grounding. On the basis of this constructed traffic and capacity for the period during which the planes were grounded, revenues, expenses, and operating income were also constructed. The difference between the reported operating income and that shown as constructed, the Board felt was a fair estimate of the cost chargeable to the grounding.\(^3\)

Since there was a difference in the accounting procedures of the carriers in handling their overhaul costs, an adjustment bringing them all into line had to be made also.

So taking into consideration all of the accounting adjustments, the Board arrived at the adjusted earnings and rates of return of the carriers before and after taxes for the period 1947-1950, reflecting the 63 cent ton-mile rate as shown in Table 4.

<table>
<thead>
<tr>
<th>Carrier</th>
<th>Adjusted Profit Before Taxes</th>
<th>Adjusted Profit After Taxes</th>
<th>After Taxes</th>
<th>Rate of Return</th>
</tr>
</thead>
<tbody>
<tr>
<td>American</td>
<td>$32,804</td>
<td>$20,846</td>
<td>7.2%</td>
<td></td>
</tr>
<tr>
<td>Eastern</td>
<td>31,361</td>
<td>20,068</td>
<td>14.6</td>
<td></td>
</tr>
<tr>
<td>TWA</td>
<td>4,905</td>
<td>3,982</td>
<td>2.9</td>
<td></td>
</tr>
<tr>
<td>United</td>
<td>16,954</td>
<td>10,746</td>
<td>4.6</td>
<td></td>
</tr>
</tbody>
</table>

Source: Docket No. 2849 et al., O.S. No. E-5560 (1951), p. 11.

In commenting on the data shown in Table 4 the Board said:

... It is apparent that with a 63 cent rate, after accounting adjustments only, for the years 1947-1950, the rates of return of 2.9% and 4.6% for TWA and United, respectively are substantially below the customary standard. It is therefore apparent that in the absence of other adjustments appropriate for rate-making purposes, TWA and United would be entitled to substantial additional amounts of mail pay support. There are other adjustments of a substantial nature, however, which we shall discuss shortly, but before we do this, we want to reaffirm our previously held views that these four carriers naturally fall into a single group for rate-making purposes.\(^5\)

The Principle of Comparability

Here the Board is seen to be clinging consistently to its principle of "comparability." Early in 1943 the Board first expounded its theory of "comparability of the Big Four" when a uniform mail rate of 60 cents per mail ton-mile was put into effect, and then in January 1945 was lowered to 45 cents per mail ton-mile, but still uniform for the four carriers. The inherent operating characteristics of these four

\(^3\) For details, see appendix 10 of CAB Docket No. 2849 et al., O.S. No. 5560 (1951).

\(^5\) Ibid., p. 11.
carriers have been the strongest in the industry despite the sharp fluctuations from year to year.

Certain factors tend to make these carriers stand out among all the rest and provide what the Board called comparability of opportunity of the carriers to earn reasonable profits under uniform mail rates, as distinguished from the actual profit and loss position achieved by the carriers under different managerial approaches and varying degrees of economy and efficiency. The level of attainable costs is affected by volume and density of traffic because of the ability to spread overhead and make better use of personnel and physical facilities. The Big Four carriers are far ahead of all others in the United States in so far as both volume and density of traffic are concerned and it is a plain economic fact that high volume and density make possible the attainment of high load factors with the concomitant reduction in the level of unit costs per unit of traffic.

Among the traffic characteristics that give the Big Four such an advantage, and in which they are similar, is to be found the long-haul nature of movement, both from the standpoint of the average length of aircraft movements and the average distance of movement of its revenue traffic. When the relatively high costs of selling and loading traffic is analyzed, the carrier’s earnings are seriously affected by the length of haul due partly to the reduction in the number of stops and corresponding decreases in landing, take-off and station costs per mile.

Another advantage enjoyed by these carriers at that time arose from high volume and density of traffic which gave them the ability to acquire and make use of the most modern types of flight equipment as well as other modern facilities on their systems. After the first costs involved in making the changes to new equipment were absorbed, the carriers enjoyed considerably lowered ton-mile costs and the new types of equipment appealed to the public so as to attract additional traffic to the extent that the competitive position of the Big Four carriers in relation to their competitors was materially strengthened.

In closing its discussion of the matter of comparability of the Big Four, the Board said:

While these characteristics are by no means all-inclusive as an indication of the inherent strength of each carrier’s route structure, they represent a reasonable indication of the relative comparability of the carriers. It must be recognized, of course, that many of the individual factors are subject, at least in part, to the effectiveness of management in developing the potential of its route structure. It is true that these operating characteristics indicate considerable spread from carrier to carrier with respect to each factor. However, each carrier has certain advantages over others with respect to a number of the factors cited. Although there is a substantial spread in total volume of revenue traffic among the group, there is consid-

36 Gill and Bates found that the ability to attract business was very important in the attainment of self-sufficiency. See, Gill, F. W. and Bates, G. L., Airline Competition. Cambridge, Mass., Harvard Univ., 1949, p. 615 ff.
erable evidence to support the conclusion that the smallest of the Big Four has sufficient size to eliminate any basic handicaps of inadequate size. On the basis of all available information, it is the Board's conclusion that the Big Four constitute a homogeneous group for rate-making purposes and that the four carriers have a comparable opportunity, under conditions of economical and efficient management, to earn a fair profit under a uniform mail rate.\(^{37}\)

In reviewing the results of its computations up to this point, the Board admitted that a 2.9 per cent return for TWA and a 4.6 per cent return for United was not what would normally be considered a fair profit, despite the existence of comparable opportunities to enable them to earn such a profit. The factors which have caused this, according to the Board, were the inappropriateness of some of the aircraft types, inadequate or inappropriate seating configuration of aircraft, excessive scheduling, losses from all-cargo operations, and certain policies in regard to ticketing, reservations, administrative, solicitation and selling expenditures. The Board refused to underwrite the losses stemming from these items. In connection with the all-cargo operations, the suggestion of the carriers that the way to arrive at the cost of such services was by using out-of-pocket costs, was turned down. Even though a minimum amount of all-cargo service had been underwritten for Braniff, Delta and Capital,\(^{38}\) the aggregate capacity of the Big Four operated in their combination services, the extent and nature of their routes and the extent of their competition with non-subsidized cargo carriers made it unwise and not in the interest of the developmental purposes of the Act to cover such losses. The development of the freight markets of the Big Four, it was felt, would not be seriously restricted by this decision, especially since such operations were not started with any idea of assistance, while such a thing was not true in the case of the smaller carriers.

We necessarily come to judge the performance of carriers after that performance has taken place. As a practical matter, unless we resort to comparisons among carriers as to certain costs and employ statistical methods, there is no way of enforcing the standards of economical and efficient management set out in the Act. We are satisfied that the comparative method is sound once reasonable precautions have been taken to allow for differences in essential characteristics of the carriers compared.\(^{39}\)

Although the exact amounts of the disallowances considered fair were not available as the Board was not in position to determine with finality what these uneconomical and inefficient operations cost, nevertheless, it was satisfied at this stage that if such costs had been avoided, there would have been no question of these two carriers coming out with a fair profit, after taxes for the period under consideration.

\(^{37}\) CAB, O.S. No. 5560, op. cit., p. 14. See also appendix 1 of this order for a comparison of operating statistics for Big Four carriers.

\(^{38}\) See 9 CAB 607 and 645 (1948); also, 10 CAB 705 (1949).

\(^{39}\) CAB, O.S. No. 5560 op. cit., p. 16.
This is one of the best examples of the reasoning used by the Board in its judgment of "honest, economical and efficient management" as called for in the Act.

**The Development of the Service Rate**

In approaching the problem of a final mail rate for the Big Four after January 1, 1951, the Board stated that it was apparent from the record that these carriers no longer needed any mail compensation above that which is a fair payment for the service performed in carrying the mail. Hence the rate set at that time was termed a "service rate."

**Cost of Service Versus Value of Service**

The first step was to uphold its belief in the cost of service principle. In answering those who urged the use of value of service because of the inaccuracies and uncertainties of costing common services, the Board quoted from the Interstate Commerce Commission:

... As between the two cardinal principles of rate making—the cost of service and the value of service—the first is decidedly more capable of exact determination and mathematical expression than the latter. If, as some would have us believe, no measure has yet been discovered for ascertaining the cost of the service, what measure is there suggesting anything definite and tangible and sufficiently practical in its application to carry conviction which can be applied to the value of service?40

It was recognized that the value of service concept has been employed in fixing commercial rates and that some low grade products such as coal and gravel move at rail rates below fully allocated costs. Moreover, the development of more refined methods of accounting in recent years, together with the availability of more and better data have reduced the large amount of so-called fixed costs which were bothersome in the case of so many industries producing common products, with the result that cost of service has become more important and value of service less important, at least in so far as its use in determining "what the traffic will bear." In this case it would not be so logical to give much consideration to the value of service or demand side of the problem since the Government is the sole purchaser of mail service and its ability to pay is limited only by policies and available funds.

Under these circumstances application of the value of service concept might result in mail rates high enough to give the carriers whatever amounts needed to enable them to perform the service, including amounts to cover losses on passenger and freight services, and render futile all effort to separate subsidy and mail payments. Nor do the rates charged by the Post Office Department for air mail provide an independent test of the value of service since they are determined by Congress in the light of broad policy which gives

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effect to considerations of well being different from the objectives and tests of sound commercial practice. Also, the Post Office as the contractor for, and seller of, mail service has costs of its own and performs other classes of service than air mail. It is entitled to apportion its costs and profits in the light of its own aims and policies as defined for it by Congress.\textsuperscript{41}

\textbf{THE COST OF MAIL SERVICE}

Having defended its use of cost of service as the main principle in setting the rates, the Board then set forth its method of arriving at cost for mail rate purposes. The concern was with the determination of the average cost of the many variations in air mail service to small as well as large communities. In 1950, it was pointed out, roughly ten per cent of the mail volume of the three transcontinental carriers moved on coach and all-cargo flights which left 90 per cent moving on combination flights, while Eastern's traffic was evenly divided between coach and regular combination service. Since coach and all-cargo operations (at that time) were mostly long-hop between large cities, adequate mail service for the nation could be said to be mostly dependent upon the regular combination service. Upon this basis it was decided that the proper service mail rate should be based on the cost of transporting the mail in the regular combination service.

Since the reports of the carriers did not furnish sufficient breakdown of costs, the Board set its staff to work making an allocation of costs to the regular combination service.\textsuperscript{42} First a functional reclassification of operating expenses and related capital costs was made and these were correlated with the appropriate activity units as a basis for allocation, first between regular combination, coach and all-cargo service, and second between mail and other traffic comprising the regular combination service.

Before the cost allocations were made, various accounting adjustments as discussed previously for the 1947-1950 period were made but since the cost levels of the carriers for 1950 did not appear to be unreasonable, no further adjustments were considered necessary.

\textbf{CLASSIFICATION OF TRAFFIC}

An analysis was then made in which full-fare passengers and mail were termed “primary traffic” because it is for this type of traffic that the combination services are primarily operated and also because of the fact that this traffic has always been the most lucrative. Schedules are operated to meet the demand for mail and first-class passenger traffic and in order to avoid turning mail or passengers away, peak requirements determine the schedules. Since there is unused capacity at off-peak periods, the cost of this unused capacity should properly be charged to the priority of this primary traffic.

\textsuperscript{41} CAB, O.S. No. 5560, \textit{op. cit.}, p. 20.

\textsuperscript{42} See \textit{ibid.}, appendix 12 for complete allocation for each airline and basis upon which made.
Express and freight, while carried on combination flights, were given secondary consideration since they are off-loaded in order to make room for mail and first-class passengers when necessary. However, this secondary or second-class traffic does reduce unused capacity but its revenue yield is considerably below that of the primary traffic and as such, could not be expected to stand its full share of common costs. Yet the demand for express and freight service is such that the carriers can charge a rate substantially above their direct costs. Hence it is a worthwhile type of traffic since it makes a contribution to overhead, which reduces the cost of the primary services. From this it was concluded that the express and freight carried on combination flights should be treated as by-products. In the allocation of costs, the direct handling, processing, and promotion costs were allocated to express and freight. This meant that the secondary traffic would share in capacity costs only to the extent of the excess of revenues over these direct costs assigned to such traffic on the regular combination flights.

Traffic resulting from the family-plan promotional rates was also treated as a by-product due to the off-peak nature of the service and the improved load factors and better utilization of space which it makes possible. So, following the same method used with express and freight, no overhead was charged passengers traveling under the family-plan; charging this traffic with capacity costs only to the extent of the excess of the related revenue over direct costs, including passenger service costs such as food, passenger liability insurance, stewardess costs, ticketing and similar items.

Cost Allocation

Under the heading of capacity costs, not only were the costs ordinarily designated as direct costs grouped, but also indirect maintenance, flight control, meteorology and dispatch, landing fees, and ground handling of aircraft. The allocation of used capacity costs between full-fare passengers and mail was made on a revenue ton-mile basis.

Unused capacity costs were determined by subtracting net by-product revenues and the costs attributable to the capacity used by mail and full-fare passengers and mail from total capacity costs. These unused capacity costs, because they result from scheduling to fit peak requirements demanded by the full-fare passenger and mail traffic, were charged to these two primary services.

In analyzing records for the past period it was found that the average daily mail volume fluctuated to a greater extent, relatively, than the full-fare passenger traffic and that there was a greater degree of unbalance in the mail traffic. At the same time it was noted that, at the peak periods, the passenger traffic contributed more to the demand in the direction of heavy traffic flow than did the mail; in fact, the mail often offset the heavy demand, which tended to balance
the traffic. It was also found that the daily fluctuations of the mail and the directional unbalance of the mail partially overlapped.

In the allocation of unused capacity costs, the Board assigned such costs to the services giving rise to those costs, realizing that the priority of mail traffic is an intangible factor, very difficult to assess accurately as to its real cost effect. In order to solve this problem, a measurement of the impact of the priority factor on costs was attempted by measuring the effect of the mail volume fluctuations relative to the full-fare passenger traffic. This was done by weighting the ton-miles of mail and full-fare passengers by their respective indexes of fluctuation in daily volumes and such weighted revenue ton-miles were used as a basis of allocation of the unused capacity costs between the primary services. This method of weighting the two primary services along with treating the mail as a primary service, was considered to make adequate compensation for the priority factor.

In analyzing more closely the method of costing used by the Board, it is found that the major classes of expense directly attributable to non-mail services were assigned directly to these non-mail services. Passenger service expense, passenger and cargo liability insurance, ticketing and reservations costs, handling, processing, promotional and solicitation costs, and advertising and publicity costs were directly assigned.

Relative to advertising costs for the mail service, it was decided that, even though a carrier might find it to its own advantage from a revenue standpoint to advertise the mail service, it still was not a sound policy to allocate such costs to the mail services.

It was pointed out that the costs directly attributable to the mail were not known, or at least had not been separated. However, the Board felt that the costs that had been used in this rate decision did not understate the over-all costs fairly attributable to the carriage of the mail, since the direct costs charged directly to the non-mail services were not all-inclusive. As an example of this the investment in passenger facilities in the planes and maintenance of these facilities had been treated as common costs, allocated to all the services. In general the allocations were made on a use basis related to appropriate activity units which were the same units used in the allocation of the various classes of costs between the regular and combination service and coach and all-cargo services. In the words of the Board,

... In making the allocations of the various categories of costs, we have included the total cost of each function, which combines operating expenses and capital costs. The capital costs include the element of return on investment related to the particular functions.43

Using the costing techniques just described, the cost of handling the mail was determined to be as shown in Table 5.

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TABLE 5—COST OF HANDLING THE MAIL—BIG FOUR—PER TON-MILE

<table>
<thead>
<tr>
<th>Operating cost excluding return on investment</th>
<th>Average</th>
<th>American</th>
<th>Eastern</th>
<th>TWA</th>
<th>United</th>
</tr>
</thead>
<tbody>
<tr>
<td>8% return on investment including taxes at 47%</td>
<td>5.15¢</td>
<td>5.72¢</td>
<td>4.98¢</td>
<td>4.46¢</td>
<td>5.46¢</td>
</tr>
<tr>
<td>Total cost of mail including return</td>
<td>44.43¢</td>
<td>41.47¢</td>
<td>48.21¢</td>
<td>45.38¢</td>
<td>42.67¢</td>
</tr>
</tbody>
</table>

Source: CAB Docket No. 2849 et al., O.S. No. 5560 (1951), p. 27.

Since the purpose of this investigation was to set a permanent rate for the future for the carriers involved, the 47 per cent income tax, effective in 1951 was used although in 1950 the effective Federal income tax rate was only 42 per cent. Allowing an 8 per cent return, the average cost of mail was estimated to be 44.43 cents per ton-mile which was the basis upon which the permanent rate was set at 45 cents per ton-mile.

Again in defending the use of the principle of comparability in setting the same rate for the four carriers as a group, the Board referred to a previous decision in which it had stated its position:

Moreover, it is not our intention, nor do we believe it would be in the public interest, to fix the service mail rate on a cost-plus basis by extending to all carriers a uniform or fixed rate of profit on the required investment irrespective of the level of the operating costs. Except for cost differences which are inherent in the type or character of service or in the area served and where therefore are applicable alike to all carriers of comparable size, there would appear to be little justification for variations in the service mail rate because of differences in carrier operating costs. The “service” as opposed to “need” mail rate is not designed to meet the financial need of the individual carrier but rather it is intended to be fair and reasonable in terms of both quality of the service and the reasonable and necessary costs under conditions of economical and efficient management. Also, a uniform service mail rate provides added incentive for increased operating efficiency by making the rate of profit directly dependent upon each carrier’s competitive performance as measured by the relation of its costs to the costs of other carriers rather than upon an allowable rate of return on the investment of each individual carrier.44

Thus it was the Board’s conclusion that a 45 cent rate per mail ton-mile was a fair and reasonable uniform service rate for each of the Big Four carriers as a permanent rate beginning January 1, 1951. The rate was to be a flat rate applied to mail loads actually carried and no minimum load was prescribed, since the method of costing used resulted in an average cost of all the varied mail services performed, averaging out high mail loads with light mail loads, service to small communities as well as to large cities, and the long-haul and short-haul movements.

44 6 CAB 567, 571 (1945).
As the Board pointed out, the costing techniques used here represented a long step forward when compared to methods used in the past and at the same time improvements could be expected to be made in the future. Certain costs considered common at that time might later become classified as a direct cost of one of the services. Changes would have to be made as the industry develops and goes through higher stages. Further refinements in rate formulas could be expected in the future such as block rates or two-part rates reflecting as they would more accurately the cost characteristics of the mail service. Increases in the volume of mail due to such things as moving first-class mail by air would necessitate changes in the methods of costing as would a change in the priority characteristics of the mail and passenger service relative to the other services.

**Effect of Rising Costs Noted**

Since this decision was being rendered in July 1951, a trend of rising costs was readily apparent and the Board realized that it would have to take that into consideration since it was basing its decision for the future upon 1950 costs. Offsetting this rise in costs, which it was admitted was inevitable, was the tremendous expansion in traffic and the related improvements in the operations of the carriers, including increased load factors. The ability of the carriers, through various types of economics to absorb inflationary pressures is illustrated by the reported costs for all services per revenue ton-mile as shown in Table 6.

<table>
<thead>
<tr>
<th></th>
<th>American</th>
<th>Eastern</th>
<th>TWA</th>
<th>United</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calendar year 1949</td>
<td>47.10¢</td>
<td>56.95¢</td>
<td>53.15¢</td>
<td>50.67¢</td>
</tr>
<tr>
<td>Calendar year 1950</td>
<td>41.70</td>
<td>49.34</td>
<td>49.11</td>
<td>44.10</td>
</tr>
<tr>
<td>12 months ended 3/31/51</td>
<td>39.22</td>
<td>47.16</td>
<td>48.30</td>
<td>41.55</td>
</tr>
</tbody>
</table>


One of the important factors that helps explain this downward trend in costs was the introduction of new equipment into the operation of the carriers. This new equipment was being operated at a decidedly reduced cost per ton-mile and moreover was attracting more passengers and was able to handle more passengers which should mean that more of the total cost would go to passenger service, reducing the share to be borne by the mail service.

In Table 5 showing the per ton-mile cost of mail service, which includes return on investment, it is to be noted that both TWA and Eastern had a cost above the 45 cents (45.38¢ and 48.21¢ respectively.) Both of these carriers in 1950 operated a much larger percentage of their mileage with the uneconomical DC-3 airplane than did American and United. American had completely replaced its fleet with postwar equipment early in 1949 and in 1950 United was operating DC-3s on
about 30 per cent of its route mileage. Eastern was using the DC-3 equipment for about 50 per cent of its plane miles while the corresponding figure for TWA was 38 per cent. The high ton-mile cost characteristics of the DC-3 in comparison with later equipment is shown by the data in Table 7.

Table 7 — Capacity Costs per Available Ton-Mile—Big Four—Calendar Year 1949

<table>
<thead>
<tr>
<th></th>
<th>American</th>
<th>Eastern</th>
<th>TWA</th>
<th>United</th>
</tr>
</thead>
<tbody>
<tr>
<td>Douglas DC-3</td>
<td>....</td>
<td>17.87$</td>
<td>20.01$</td>
<td>22.13$</td>
</tr>
<tr>
<td>Boeing B-307</td>
<td>....</td>
<td>....</td>
<td>21.61</td>
<td>....</td>
</tr>
<tr>
<td>Convair 240</td>
<td>16.44</td>
<td>14.15</td>
<td>....</td>
<td>15.72</td>
</tr>
<tr>
<td>Douglas DC-4</td>
<td>....</td>
<td>....</td>
<td>....</td>
<td>....</td>
</tr>
<tr>
<td>Douglas DC-6</td>
<td>12.44</td>
<td>....</td>
<td>....</td>
<td>12.61</td>
</tr>
<tr>
<td>Lockheed L-49</td>
<td>....</td>
<td>14.69</td>
<td>13.10</td>
<td>....</td>
</tr>
</tbody>
</table>

Source: CAB Docket No. 2849 et al., O.S. No. 5560 (1951), p. 32.

A further explanation of Eastern's rather high mail cost is found in the fact that in 1950 almost 52 per cent of its mail ton-miles were carried on coach and all-cargo flights while the other carriers had a corresponding ratio of 8 to 15 per cent. Since the mail was costed on the basis of the regular combination service alone, a weighted average of the cost of mail on coach and cargo flights would be much lower for Eastern than for the others. With this line of reasoning, the Board came to the conclusion that its proposed rate of 45 cents per mail ton-mile would not be unreasonable for Eastern Air Lines.

The Impact of Demand

In one way the Board was inconsistent in its thinking in refusing to give consideration at all to the demand side of the mail pricing problem. This was to be well illustrated later when the Postmaster General decided that there was not much point in his Department paying different rates for the same service between two points just because the costs of one carrier were higher than those of the other and the rates, set by the CAB, were higher for the high cost carrier (which might very well have been offering inferior service with older equipment).

It is true beyond all doubt that, when given the choice, a well-informed public will always choose the cheaper of two articles or services that are the same in other respects. Competing carriers have always recognized this fact and the same rates are charged for the same services between the same points; that is, in all cases except that of mail. The fallacy here is in calling a rate a "service" rate when it is based upon the costs of the carrier. The value of service element cannot be ignored in considering such a rate since it cannot be foretold just when this element will become of great importance. Assuming that the lowest of two rates (e.g. Atlanta-Chicago: Eastern 45 cents, Delta 53 cents) is truly a service rate, that is, a rate that is reasonable
from all viewpoints for the service performed, then the difference, or 8 cents to the higher rated line is a subsidy, even though it is based upon the cost of the carrier. There are only two bases for justifying this difference in mail rates between the same two pairs of cities. One is the need of the airline; but this is not supposed to be a "need" rate! The other is that the customer (the Post Office Department) will pay the difference which means that the demand is the most important factor in influencing the use of this kind of rate.

The 45 cent per mail ton-mile rate as set by the Board in 1951 became the basis for the so-called service rates for all of the certificated carriers when the subsidy separation by administrative action was announced later in 1951. The average costs of all of the other carriers as related to the average costs of the Big Four were used as the basis for placing them in service rate groups ranging from 53 to 726 cents per mail ton-mile. Perhaps this was not a sound foundation upon which to build the service mail rate structure. Since the factors of density of traffic, number of stops, distances between stops, as well as many others affect the costs of the carrier, it is logical that there be a difference in the average costs of the carriers. However, it is to be noted that where a high cost carrier is competing with a low cost carrier, the rates are the same for the same service where the public has a choice. The Board was to learn the weakness of this phase of its rate making.

On March 22, 1954 the Board instituted mail rate proceedings reopening the service mail rates of the thirteen domestic trunkline air carriers. In connection with the determination of the fair and reasonable service mail rates, the Board had as its objectives the development of a service mail rate structure which would produce the same rate for all air carriers serving any given pair of communities.

**Determination of the Cost of the Mail Service**

Even though faced with the new problem of considering demand in its rate making for the mail, the Board in 1954 repeated its contention that the true basis and the only basis for determining the fair and reasonable service rate for the mail is a cost basis. Reference was made to the Big Four Mail Rate Case just discussed and it was pointed out that the value of service concept was considered fully and rejected at that time. The Board did not seem to realize that the conditions facing it at this time were different, and that it was being forced to consider value of service along with cost of service. The Board said,

> We find no additional reason not heretofore considered by us in the Big Four case which would warrant our departure from the cost standard. Accordingly, as in that case, the service rates have been based upon the cost of the mail for the various carriers parties to this proceeding.

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45 CAB, Administrative Separation of Subsidy from Total Mail Payments to United States Air Carriers, October 1951.
46 CAB Docket No. 2849 et al., O.S. No. 5560 (1951).
In further support of its position, the Board quoted the President’s message transmitting Reorganization Plan No. 10 providing for the separation of need and service pay for the airlines. There the President said, “... I believe it would be appropriate to establish the cost principle as a matter of definite legislative policy.”

**The New Approach**

In discussing the over-all approach in costing the mail, the Board pointed out that it is necessary to allocate costs to the various classes of traffic, since none of the mail service is ordinarily performed on exclusive mail flights. It is true that some of the mail moves on all-cargo flights, but most of the mail moves on combination flights, carrying passengers, express, and freight as well as mail. Thus the determination of the cost of mail service involves an appropriate allocation of costs common to the various classes of traffic moving on the same flight and, at this time the Board had found no basis for making any direct assignment of cost to the mail service.

The Board referred to its “more refined cost allocation as a basis of determining the 1950 cost of mail in the Big Four case” in which a “functional reclassification of operating expenses and related capital costs were correlated with appropriate activity units as a basis of allocation ...” Data for such a breakdown were not available at the present time, said the Board, and because of the need for haste, the detailed cost breakdown as set forth in the Big Four rate case was utilized as a point of departure.

Briefly, the method used was to take the 1950 detailed data for the Big Four and recost the mail on the basis of certain modified principles thus developing a modified cost of mail for the four carriers. Then a relative cost index for the latest twelve-month period in relation to the calendar year 1950 was developed, which was applied to the modified mail cost for each of the carriers in order to determine the mail cost for the twelve months ended June 30, 1954.

The cost data for the other nine carriers was not available in the form and to the extent of break-down that had been developed for the Big Four, but the average unit cost of all services was readily available from the Form 41 reports.

Based upon the Big Four average cost of mail and with due regard to the differences in average cost levels among the various trunkline carrier groups, we have developed a multi-element service mail rate formula which produces fair and reasonable mail compensation for each of the thirteen trunklines and which will yield each carrier an average effective rate per ton-mile which reasonably approximates its relative cost level.\(^49\)

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48 Ibid., p. 6.
49 Ibid., p. 8.
In view of the fact that during the three years elapsed since the Big Four decision was rendered, the amount of mail carried on all-cargo flights had increased from about 10 per cent to better than 30 per cent, it was thought best to change the method of allocation to some extent. Each carrier's total operating cost, segregated into functional groups, was allocated to the passenger service and to the all-cargo operations, and from that point the same method was used as in the previous case.

The next step was the determination of the cost of mail in each class of service. The total cost of the mail for each carrier which is the basis for the rate finally decided upon is a weighted average of the cost in passenger and all-cargo services.

In determining the cost of mail moved on passenger flights, the first step was to arrive at capacity costs which was done by including direct flight costs, indirect maintenance, flight control, meteorology, dispatch, landing fees, and ground handling of aircraft expenses. Included with these also was the direct cost of necessary or incidental nonrevenue flights and as an offset, net incidental revenues from all sources were credited against the total capacity cost.

In order to find an average available ton-mile cost for this category, the total capacity costs, exclusive of nonrevenue flights and the credit for incidental revenue, were divided by the available ton-miles. This average available ton-mile cost was then assigned to each revenue ton-mile of passengers, freight, express, and mail, which was the same as charging to each class of traffic the average capacity cost based upon the equivalent of 100 per cent load factor. These costs so derived were given the name of "used capacity costs" to distinguish them from the capacity costs which were not included because of the spread between the 100 per cent load factor and the actual load factor. The latter were dubbed "unused capacity costs," and were allocated to passengers, mail and express traffic on a weighted ton-mile basis, with full weight assigned to passengers and mail and half weight to express. None of the unused capacity cost was allocated to freight because freight traffic is normally carried on a space-available, non-priority basis on the passenger flights. Giving half weight to express was in recognition of its lower priority.

Net incidental revenues were credited to the unused capacity costs previously allocated to each class of traffic and the cost of non-revenue flights assigned to each type of traffic on the basis of all other capacity costs.

The Board felt that the techniques used in allocating capacity costs were the most reasonable that could be developed on the basis of information available at that time, when the joint nature of the service performed on passenger flights is considered.

It seems clear that the used capacity cost should be assigned to each class of traffic in proportion to the relative use actually made
of that capacity; and the revenue ton-mile basis has consistently been regarded as the most appropriate basis for measuring such use.

Mail is entitled to priority in movement ahead of all other classes of traffic although the postal regulations and practices do not require the carriers to transport abnormal mail loads on individual flights. On the other hand, the over-all capacity of passenger flights operated by each carrier appears to be related more to passenger service considerations than to the requirements of the postal service.

On balance, we believe that the allocation of unused capacity costs with equal weight to passengers and mail, half weight to express and no weight to freight properly reflects the pertinent cost characteristics of each class of traffic and is the most reasonable allocation consistent with the priority of each class of traffic.\(^5\)

As was done in the 1951 case, all direct expenses such as passenger service and handling, cargo insurance, selling and advertising were treated as peculiar to the commercial service and so assigned directly to nonmail services and none charged to cost of handling the mail. Traffic handling costs, however, which are the costs of loading and unloading the aircraft were allocated on the basis of tons enplaned to each class of traffic. Such general expenses as administration, ground maintenance, taxes and cash discounts were allocated to each class of traffic in proportion to all other operating costs borne by each class of traffic.\(^5\)

The technique involved in ascertaining the cost of mail or all-cargo flights was similar to that just discussed with one exception; the total capacity costs were assigned equally on the basis of revenue ton-miles. Even though all-cargo flights are usually scheduled to fit the needs of the freight traffic, mail must still be given priority, and so it seemed logical to assign the capacity costs on the basis of ton-miles.

In arriving at the cost of capital, the standard basis of 8 per cent return on investment allocable to the mail service, plus related Federal income taxes was used.

Such cost of capital has been included in the various functional categories along with corresponding operating costs, and the allocation of investment and related capital costs to the mail service has been made on the same basis as the corresponding operating costs in the particular functional categories.\(^5\)

Because of changes in cost levels between 1950, which was the basis for the cost of the mail service up to this point, and the price levels facing the carriers during the fiscal year 1954, it was necessary to make adjustments the same as were made in the 1951 order using the figures for the calendar year 1950 and these for the fiscal year 1954 starting in each case with the reported operating expense and the reported investment. The percentage comparison of the figures for the two years was the adjustment factor which was applied to the

\(^{50}\) Ibid., pp. 10, 11.

\(^{51}\) For details of allocation see ibid., appendix 2.

\(^{52}\) Ibid., p. 12. See also appendix 2.
modified 1950 mail cost of the respective carriers in order to arrive at the current cost of mail for each carrier. Table 8 gives the adjustment factor and the modified 1950 mail cost as well as the current (1954) mail cost.

In arriving at the average figure of 39.85 cents per ton-mile for carrying the mail from terminal to terminal, the Board had used costing techniques and principles consistent with those followed in the Big Four proceeding in 1951 but with certain modifications. One, already mentioned, was the allocation of the lower costs of carrying mail on coach and all-cargo flights to the mail so that these savings are reflected in the cost of the mail to the government. Another modification is found in the method of treating capacity costs. In 1950 the express and freight were treated as by-products and an added weighting was given the mail in assigning the unused capacity costs due to its priority, but in “the present stage of development of the industry” it was thought more sound to allocate these costs as joint expenses applicable to all four classes of traffic.

<table>
<thead>
<tr>
<th>Carrier</th>
<th>Adjustment factor</th>
<th>Modified 1950 mail cost</th>
<th>Current (1954) mail cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>American</td>
<td>9.34%</td>
<td>35.99¢</td>
<td>39.35¢</td>
</tr>
<tr>
<td>Eastern</td>
<td>3.76</td>
<td>41.38</td>
<td>42.94</td>
</tr>
<tr>
<td>Trans World</td>
<td>-3.20</td>
<td>38.85</td>
<td>37.61</td>
</tr>
<tr>
<td>United</td>
<td>7.06</td>
<td>36.89</td>
<td>39.49</td>
</tr>
<tr>
<td>Average</td>
<td></td>
<td>38.28¢</td>
<td>39.85¢</td>
</tr>
</tbody>
</table>


It should be noted at this point that in the 1951 decision certain non-recurring costs were recognized and amortized over a five-year period including training, integration of new equipment, and costs of grounding equipment which had proven faulty. The five-year period having expired and such costs as had been incurred of this nature since that time included in the regular expense accounts, no allowance was here made for such costs.

The Board was firmly convinced that the allocation technique which had been devised over a period of time by its staff with a great deal of time and effort was “proper on the basis of all known facts and relevant circumstances,” but it also recognized that in such a costing of joint services there could be many viewpoints and many conflicting ideas. In order to answer some criticisms of its method of cost allocation, several other bases for arriving at the cost of mail service were discussed and comparisons made.

The basis just described and which the Board finally decided to use was designated as Basis A in the comparison given in Table 9. Basis B was arrived at by treating express and freight as by-products as was done in the Big Four case in 1951; otherwise the same method was used. In basis C the allocation of total capacity costs was made
to all four classes of service on a straight revenue ton-mile basis. In
Basis D, instead of developing the 1950 mail cost and adjusting it to
current cost levels by an appropriate adjustment factor as was done
in the case of Basis A, the calculation was started with the reported
costs of 1954. These were reclassified according to functions on a
partially estimated basis consistent with the bases used in adjusting the
costs for the calendar year of 1950 in the Big Four case and then the
current cost of mail was determined by applying the allocation tech-
niques as used for Basis A.

<table>
<thead>
<tr>
<th>Carrier</th>
<th>Basis A</th>
<th>Basis B</th>
<th>Basis C</th>
<th>Basis D</th>
</tr>
</thead>
<tbody>
<tr>
<td>American</td>
<td>39.35¢</td>
<td>39.50¢</td>
<td>37.55¢</td>
<td>40.78¢</td>
</tr>
<tr>
<td>Eastern</td>
<td>42.94</td>
<td>43.23</td>
<td>41.50</td>
<td>42.24</td>
</tr>
<tr>
<td>Trans World</td>
<td>37.61</td>
<td>37.82</td>
<td>36.02</td>
<td>39.11</td>
</tr>
<tr>
<td>United</td>
<td>39.49</td>
<td>39.79</td>
<td>37.80</td>
<td>40.65</td>
</tr>
<tr>
<td>Average</td>
<td>39.85¢</td>
<td>40.09¢</td>
<td>38.22¢</td>
<td>40.70¢</td>
</tr>
</tbody>
</table>


In its report the Board did not discuss these different methods of
arriving at the cost of mail service but merely used the tabulation set
forth in Table 9 to show that other methods produced a result differ-
ing little from the one chosen. Note that in Basis C where total
capacity costs were allocated to the four services on a straight ton-mile
basis, the average rate would have been 1.63¢ less than the one chosen;
in the case of each carrier the cost would have been less. In the other
two, the cost figures were higher; Basis B, which was the method used
in 1951 was only 0.24¢ higher and Basis D, which was constructed upon
1954 costs and partially estimated was only 0.85¢ higher. It would
seem that the one used by the Board in its estimate of the cost for rate
making purposes at this time was as accurate as the various estimates
used in the cost allocation could permit.

The determination of the cost of mail service at this time was
but the first step in the determination of the rate. Since the decision
in 1951, Reorganization Plan No. 10 had brought about a formal
separation of subsidy from service mail pay for each certificated air
carrier. At that time the Board established the then existing rates as
the final service mail rates for those domestic trunklines which were
considered free from subsidy and had also set a final service rate for
each of the subsidized carriers. The carriers were divided into groups
or classes depending upon the ratio between their average costs and
the average costs of the Big Four. The trunklines fell into the first
three classes which were given the following rates: American, Eastern,
TWA, and United, 45 cents per mail ton-mile; Braniff, Capital, C&S,
Delta, National, Northwest, and Western, 53 cents per mail ton-mile;
and, Colonial, Continental, Inland, Mid-Continent, and Northeast,
75 cents per mail ton-mile.
These rates were established with the idea of yielding to each carrier payment for all of its mail services which would equal the average cost of mail for the carrier in each group, rather than to produce like payments for a given mail shipment between any specified pair of points involving two or more competing carriers. This is where one of the weaknesses of using a strictly cost basis of rate making shows up because all carriers do not have the same costs. These differences may be attributable to differences in managerial ability or decisions, or to factors beyond the control of management such as operating conditions with which they are faced, or to traffic density and unusual demands for the service.

The Effect of Demand

As far back as 1951 the Post Office Department had indicated it felt it should not be required to pay different rates for the same service and that ultimately a revised service mail rate structure would have to be devised. Even at that time the Post Office had recommended a two-part rate which would take into consideration the line-haul costs as one element and the terminal costs as the other, the net result being a like charge for like services. The Board had its staff work on such a rate but differences of opinion concerning the desirability of such a rate structure prevented its being put in at that time.

Late in 1953 the Post Office Department proposed a policy of making use of the carrier whose rate would result in the lowest cost to the Government, with comparable service. This policy would have disrupted the traditional movement of the mail because of the differences in the rates and the differences in the mileage between competing carriers on competing flights.

The Board's answer to these problems was to order an industry-wide investigation to determine a proper mail rate structure, giving the Post Office and the carriers forty-five days to submit positions and counter positions. This resulted in the decision just discussed. In addition, the Board proposed splitting the service rate applicable to the 53 cent carriers to apply 45 cents on the competitive segments and necessarily higher rates on non-competitive routes so as to maintain a 53 cent average on the system. For Braniff, this proposal was for 45 cents on 15.7 per cent of its mail volume and 54.49 cents for 89.3 per cent. For Capital, a 45 cent rate on 75 per cent of its mail volume and 77 cents on the other 25 per cent was proposed. Capital had petitioned for 45 cent rate to apply on 85 per cent of its volume and 89 cents on the remaining 18 per cent. The rate for Delta was proposed to be 45 cents for 33.33 per cent of mail volume and 57 cents for the other 66.67 per cent. Western was to get 45 cents for 50 per cent of its mail volume and 61 cents for the other 50 per cent. Both National and Northwest were proposed to go on a 45 cent rate system-wide which, it was estimated, would save the Government about $425,000 a year in service mail payments. The Post Office objected to these proposals and so the Board issued show cause orders to Braniff, Capital,
Western and Delta as to why their service mail rate from January 1, 1954 should not be split to provide a rate of 45 cents of competitive segments and 53 cents on other segments.53

In the order instituting the proceeding which resulted in the determination of the cost of the mail just discussed, the Board had two objectives in mind: (1) to determine whether the existing rate level was too high and should be reduced, and (2) to solve the problems raised by the Post Office Department.

In order to bring about uniform pay for like services, it is obvious that the mileage upon which the charge is to be based must be the same. This problem arises because of the fact that the route travelled between two major points may be, and often is, different for different carriers.

Probably the most simple method of solving the problem of uniform rates would have been to establish a flat-rate per ton-mile, uniform for all carriers. This method of setting the rate was turned down since a uniform rate level based upon the average of the thirteen trunklines, would probably be excessive for the large, long-haul carriers which have an average cost below the average for the group, and at the same time, would most likely be inadequate for the short-haul carriers who would receive less than their reasonably attainable costs. At the same time, if the rate were set so as to give the large carriers a reasonable return, the small carriers whose route characteristics do not make possible, at this stage of development, the attainment of the same low cost under even optimum managerial efficiency, would receive a return much below cost.

Development of the Two-part Rate Formula

In determining the two-part rate formula (one that would recognize the differing nature of line-haul costs and terminal costs) two basic steps were involved: (1) the ascertainment of the proportion of the total mail cost to be included in the line-haul rate, expressed as a rate per mail ton-mile, as well as the determination of the remaining portion of the total cost constituting the terminal charge which is expressed as a rate per pound of mail enplaned at each station; and, (2) the determination whether to treat all stations as a single class or whether to classify stations according to size or on some other appropriate basis. As the Board said,

The overriding consideration in the development of the rate formula must, of course, be that the resulting payments under the formula will constitute fair and reasonable compensation for the various carriers consistent with their reasonably attainable costs.54

The line-haul costs are the expenses of moving the mail from terminal to terminal and are what is left of total costs after the costs of loading, unloading, landing, and takeoff are taken out. All costs include related overhead and capital costs.

54 CAB O.S. No. E-8678, op. cit., p. 22.
Admittedly a considerable degree of judgment is involved in determining the division of the cost of mail between the line-haul element and the terminal element. Since available data showed that the line-haul costs were somewhere between two-thirds and three-fourths of total mail cost, originally it was proposed that 75 per cent of the Big Four cost of mail be used as the line-haul rate. In the final order this was changed to 80 per cent of the total cost, which along with some minor adjustments and corrections resulted in a rate of 30.17 cents per mail ton-mile for the line-haul portion.

Since one of the primary aims of this investigation was to provide uniform rates for the same service regardless of the carrier involved and since the total charge is to be made up of the pounds times the terminal charge and the miles times the line-haul charge, it was necessary to standardize the mileage between all pairs of cities involved. This problem was partially solved by deciding to use the shortest mileage flown by the short-line carrier, and the official schedules as designated by the Postmaster General as of June 1, 1955 were to be used as standard mileage, subject to annual readjustment. However, the problem was not quite that easily solved since there are circumstances where the flight patterns require a routing with one or more intermediate stops which frequently means a greater mileage between terminal points. This brings up the question as to whether the formula would fully compensate the long-haul carrier for the service performed. Should the carriers be compensated for mileage flown over and above the short-line routings and if so to what extent?

A logical approach to this problem was made by taking the position that where circuitous routings are needed and demanded by the Post Office Department it should be paid for; but if not needed, it should not be paid for. Using the data at hand, the amount of circuity actually required by the Post Office Department was computed in the form of a "circuity factor" for each carrier which was applied to the line-haul portion of the rate. The calculation of the line-haul rate is shown in Table 10. Some slight corrections and refinements were made in the final order resulting in the rate of 30.17 cents per mail ton-mile instead of 30.10 cents as shown in this table.

<table>
<thead>
<tr>
<th>Carrier</th>
<th>Over-all Portion Covered by Recognized Line-haul Rate</th>
<th>Circuity Factor</th>
<th>Rate Line-haul</th>
</tr>
</thead>
<tbody>
<tr>
<td>American</td>
<td>39.354</td>
<td>29.514</td>
<td>0.78%</td>
</tr>
<tr>
<td>Eastern</td>
<td>42.94</td>
<td>32.31</td>
<td>1.27</td>
</tr>
<tr>
<td>Trans World</td>
<td>37.61</td>
<td>28.21</td>
<td>0.20</td>
</tr>
<tr>
<td>United</td>
<td>39.49</td>
<td>29.62</td>
<td>0.86</td>
</tr>
<tr>
<td>Average</td>
<td>39.856</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>


(Note: Changes in these calculations resulted in a line-haul rate of 30.17¢ in the final order—Order No. E-9284, June 7, 1955.)
In determining the terminal rate, studies covering all stations for a representative group of the thirteen domestic trunklines were made to examine the relationship between the station cost per ton of revenue traffic enplaned at each station and the size of the station as measured by total revenue tons enplaned. These studies revealed a very wide range in size of the various stations and also a clear pattern of relationship between size of station and the cost per ton enplaned. Based upon these studies, the Board decided to group the trunkline stations into four classes based upon the combined total enplaned by all carriers at each station. The tonnage limits assigned to the four classes of stations along with the rates per pound of mail are shown in Table 11.

### Table 11 — Classification of Stations and Terminal Rates

<table>
<thead>
<tr>
<th>Class of Station</th>
<th>Annual Total Revenue Tons Enplaned at Station</th>
<th>Terminal Rate Per Pound Enplaned</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>7,000 and over</td>
<td>3.32¢</td>
</tr>
<tr>
<td>B</td>
<td>750 — 6,999</td>
<td>6.64</td>
</tr>
<tr>
<td>C</td>
<td>60 — 749</td>
<td>9.96</td>
</tr>
<tr>
<td>D</td>
<td>59 or less</td>
<td>33.21</td>
</tr>
</tbody>
</table>


The classification of stations was based upon the total tons of traffic of all carriers at each stop, rather than the tons of traffic handled by each individual carrier at the station. This was done so as to permit the same rate for each carrier at the station regardless of the carrier's costs. A list of all of the stations and their classifications was drawn up. The relationship between the rates at the different classes of stations was: class A stations, 100%; class B, 200%; class C, 300%; and, class D, 1000%. In the original proposal this relationship had been 100%, 110%, 160%, and 300%. The decision to make these modifications in the formula as proposed in September 1954 was predicated primarily on the fact that the new formula was expected to produce "yields for the various carriers which will more closely approximate their cost of mail than the formula which we had tentatively employed in our earlier show cause order." 57

Looking toward problems of adjustment in the future, the Board made provision for any new station to come in as a class C station since most of the large traffic generating stations were already included in the classification and any new station would probably generate more than the minimum D group. Provision was also made for a carrier to petition for a change in station class merely upon a showing of fact which would not reopen the rate case so as to disturb the over-all rate and rate structure.

The terminal rate is applicable to each pound of mail enplaned at

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point of origin, and no separate charge covering deplaning was included since the terminal charges include both landing and unloading as well as takeoff and loading. This rule of only one terminal charge being applied also obtains in the case of mail carried on an interchange flight operated by more than one carrier. The broad principle involved is that a terminal charge will be made at each point where mail is turned over to the carrier by the Post Office Department.

The line-haul rate plus the terminal rate make up the multi-element rate for not only the Big Four but the other nine trunklines as well. Because comparable figures were not available to allow the costing of the rest of the trunklines on the same basis and to the extent that was done for the Big Four, the Board had to estimate the yield that the new rate would provide for all of the trunkline carriers.

A comparison of the estimated yield with the total cost per revenue ton-mile for 1954 is given in Table 12.

**Table 12 — Comparison of Estimated Yield With Total Cost — All Carriers**

<table>
<thead>
<tr>
<th>Carrier</th>
<th>Estimated Yield per Mail Ton-mile</th>
<th>Total Cost per Revenue Ton-mile, Fiscal 1954</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1954†</td>
<td>1955‡</td>
</tr>
<tr>
<td>American*</td>
<td>39.78¢</td>
<td>37.05¢</td>
</tr>
<tr>
<td>Eastern*</td>
<td>47.29¢</td>
<td>41.67¢</td>
</tr>
<tr>
<td>Trans World</td>
<td>37.03¢</td>
<td>35.81¢</td>
</tr>
<tr>
<td>United*</td>
<td>38.04¢</td>
<td>36.03¢</td>
</tr>
<tr>
<td>Average</td>
<td>39.43¢</td>
<td>37.00¢</td>
</tr>
<tr>
<td>National*</td>
<td>45.06¢</td>
<td>41.65¢</td>
</tr>
<tr>
<td>Northwest</td>
<td>39.15¢</td>
<td>36.62</td>
</tr>
<tr>
<td>Average</td>
<td>41.15¢</td>
<td>38.32¢</td>
</tr>
<tr>
<td>Braniff</td>
<td>56.19¢</td>
<td>50.00¢</td>
</tr>
<tr>
<td>Capital</td>
<td>55.54¢</td>
<td>49.04</td>
</tr>
<tr>
<td>Delta</td>
<td>50.31¢</td>
<td>44.73</td>
</tr>
<tr>
<td>Western</td>
<td>49.19¢</td>
<td>44.89</td>
</tr>
<tr>
<td>Average</td>
<td>52.62¢</td>
<td>46.93¢</td>
</tr>
<tr>
<td>Colonial</td>
<td>67.84¢</td>
<td>58.82¢</td>
</tr>
<tr>
<td>Continental</td>
<td>55.56¢</td>
<td>50.89</td>
</tr>
<tr>
<td>Northeast</td>
<td>90.91¢</td>
<td>86.62</td>
</tr>
<tr>
<td>Average</td>
<td>63.12¢</td>
<td>57.79¢</td>
</tr>
<tr>
<td>Trunkline average</td>
<td>41.46¢</td>
<td>38.56¢</td>
</tr>
</tbody>
</table>

* Entire system including overseas and international operations.
† CAB Docket No. 6599 et al., O.S. No. E-8678, p. 3. (1954).
§ CAB Docket No. 6599 et al., O.S. No. E-8678, Appendix 5, p. 1. (1954). These data include operating expenses (exclusive of passenger service, traffic and sales, and advertising and publicity), eight per cent return on investment, and provision for income taxes. The bases for these data are set forth on pages 2 & 3 of Appendix 5 and in Appendix 4.

In analyzing the data in this table it should be mentioned that the grouping is according to classes used in the Board's administrative
subsidy separation in 1951 and compares the average yield in the different groups. The Big Four originally made up group I and had a 45 cent rate; the new rate is estimated to yield an average of 37 cents for the group. National and Northwest in 1954 moved into the class I group, whereas they had formerly been in the 53 cent group II. The new formula will yield them an average of 38.32 cents it is estimated. The class II group will get an estimated rate of 46.93 cents while the class III group including Colonial, Continental and Northeast will get an estimated average rate of 59.79 cents compared with the old rate of 75 cents.

It is to be noted that the average yields for the different groups bear the relationship of a gradually ascending one from group I through group III which follows the relationship of the costs of the carriers in these groups. However, there are a couple of aberrations which are not explained by the Board. The estimated yield per mail ton-mile of Eastern is much above that of the others in that group which possibly might be explained by the larger number of class C and D stations from which mail is originated. Perhaps the same explanation can be made for the 86.62¢ estimate for Northeast which is so far above any of the rest.

In defending the new formula and explaining the smaller yield expected when compared with the estimate made in 1954 (see table 12), the Board noted a downward trend in ton-mile costs when calendar 1954 data are compared with fiscal 1954 data. It was also noted that the first quarter of 1955 showed substantial gains in traffic, which would further lower ton-mile costs.

CONCLUSIONS

In general, the estimated revenues are fairly close to the estimated costs, so that the Board should properly feel that:

With due regard to the techniques whereby we have constructed the multi-element service mail rate, the cost of mail for the Big Four, the relationship between the revenue ton-mile costs for each carrier and groups of carriers as well as the estimated yields under the multi-element rate, and the differing characteristics obtaining among the various carriers as regards the length of haul of the mail, we find that the yield estimated to be produced by the multi-element rate for each of the thirteen carriers, as well as for each homogeneous group of carriers, represents fair and reasonable compensation for the transportation of the mail, and that the proposed rate is the fair and reasonable service rate for each carrier in accordance with the Act and Reorganization Plan No. 10.57a

In Table 13 is tabulated the comparison of service mail payments under the rates made effective by this new order and the rates in effect prior to April 1, 1954. It is quite obvious that the net result of the new rates, in addition to providing like payments for like service, would be the saving of $5,336,000 by reduction of service mail pay

57a CAB O.S. No. E-8678 op. cit., p. 12.
when calculated at the average estimated yield of 38.56 cents and based upon the volume of mail carried in fiscal 1954. These new rates are to be final service rates for all of the trunkline carriers; however, Braniff, Colonial, Continental and Northeast, since these carriers are still considered to be in the need class, can apply to the Board for payments over and above those made by the Post Office Department under Reorganization Plan No. 10, on the basis of the formula. The rate becomes effective September 1, 1955.

In order to solve the problem of the rate to be charged for movement of the mail from April 1, 1954 through August 31, 1955, the rate to be applied to the mail ton-miles carried each month by each carrier is the same as the estimated yield under the new formula. (See 1955 estimated yield as shown in Table 12.) For this purpose, the mail ton-miles is to be computed on the basis of the direct airport-to-airport mileage between points served for the carriage of the mail.

**Rate Making Practices**

In drawing conclusions from the early part of the Board’s rate making history and the methods used up to 1948, the apparent lack of a definite policy is disturbing. The financial condition of the airlines in 1946 and 1947 was far from satisfactory and there exists an understandable inclination to consider the limited foresight of the Board to be responsible. However, there were certain principles used and trends discernable that are of particular interest to the student of regulatory activities.

Most of the problems presented to the Board in administration of Section 406 of the Act are those which confront any administrative body whose job it is to fix just compensation for service rendered. There are, however, noticeable points of difference between the provision of a rate for compensation to the air carrier and one of government support of that carrier. One difference is the emphasis (in 406 (b)) on the air carrier as the unit of measurement which provides for the consideration, not of any particular route or operation, but the “need” of the carrier. A case in point is where the Board included in the air mail pay for one route the “need” (deficit before mail pay) arising out of operations on a second certified route, but upon which the Post Office Department had refused to place mail due to a lack of funds.\(^{58}\) The new rate when fixed was paid by the Post Office Department. In another case, the Board considered excess profits earned on one division of an air carrier to be a determining factor in ascertaining the need in fixing the rate on an entirely separate division.\(^{59}\) Congress gave the Board the great responsibility of fixing rates of mail compensation so that they would provide sufficient government aid where required to insure the development of the air transportation system to provide for the commerce needs, the postal needs, and the national

\(^{58}\) 3 CAB 161 (1941).
\(^{59}\) 6 CAB 61 (1944).
defense. The Act and the Constitution of the United States entitle the carriers to mail rates calculated to enable them to earn a reasonable over-all profit, if honestly, economically and efficiently operated.60

To the end that national purposes may be effected, it is vital to public welfare that the regulatory authority make full use of accepted methods and yardsticks of cost control to serve as a check on the quality of management and to insure and maintain the statutory standard of honesty, economy and efficiency. The Board appears to have been very casual regarding the need to decrease unit costs. The main reliance was placed upon the competitive factor under a uniform mail rate: competition with surface carriers and later, in regulated route competition with other air carriers. There was no recognizable policy of promoting an air transportation system that would be financially enabled to provide service to the public at ever lower rates. The danger to the rate structure from the dilution of traffic by increased competition and increased service on established routes does not seem to have been considered.

The great reliance, in this early period, on “needs” as the justification for subsidy rates caused the Board to approach its problem from the wrong direction and may have directly resulted in the depressed condition of the industry in 1946-47. Needs are based upon costs and cost is contingent upon valuation. Increasing investment, whether by a single carrier or several carriers serving the same area must increase cost and therefore result in a higher level of need unless traffic increases proportionately. This new need then forms the basis for an increased subsidy element in the air mail rates. In other words, if the units of input are increased without a corresponding increase in the units of output demanded, the resulting ineffectual utilization of plant must be an added cost. To completely disregard the units of input and to allow them to be greatly multiplied on the general theory that such is the intention of Congress under the Act could lead directly to the necessity of perpetual subsidy. That this danger was real was brought home to the Board in the financial crisis of the air transport industry in the year 1947 when even with air traffic at an all-time high, the domestic airlines reported a net loss of $20.7 million.

Mistaken judgment of the traffic potential or the failure to form a realistic view of the increased capacity of new equipment may have been critical factors in this crisis. At various times the Board indicated an awareness that “. . . scientific improvements . . . will undoubtedly make possible the operation of aircraft at least equal to the DC-3 at as economical levels as these ships have been operated.”61 However the Board appeared to be completely unprepared for the increased capacity of the four-engine aircraft and the influence on traffic density and hence the rate structure when, without increasing schedules, the

60 Mrs. Keyes believes this merely protects the financial status of existing carriers. See, Lucille Sheppard Keyes, Federal Control of Entry into Air Transportation, Harvard Univ. Press, 1951, p. 66 ff.
61 4 CAB 297 (1943).
larger faster aircraft were substituted for the DC-3s. With recognition of this blind spot in the policy of the Board, the Congressional Aviation Policy Board admonished "...considering the large public investment in the air transportation industry, close check on costs and efficiency of airline operations is required."62

This group wasn't the only one to be concerned by rising costs and the opportunistic decisions of the Board. The Air Co-ordinating Committee, consisting of representatives of various groups concerned with aviation, including a member of the Board, criticized the absence of a "government rate policy." The suggested development of coach services, involving as it did mass transportation techniques was given at the time as further cause for attention to the continued high level of costs in the domestic air transport industry.

If the air arm of the national defense system was to be strengthened in the manner proposed by the Congressional Aviation Policy Board which suggested moving all first class mail and parcel post by air, the trend of costs was of major importance either to the new rates that would be necessary and/or higher subsidies requires. A supporting opinion that costs would not allow mass transportation by air was expressed at the time by a noted aviation lawyer and writer when he said:

The trend of costs, the need to reduce them, and the effect of new route proposals upon the over-all costs of providing air transportation are extremely important subjects, especially in the present dynamic stage of the industry's development. Current costs are so high that the industry cannot be regarded as on a firm foundation of potential mass transportation of passengers. And any truly large scale cargo transportation with operating costs at levels even considerably less than present ranges is quite out of the question.63

It is evident that the Civil Aeronautics Board was more concerned with management problems involving the cost of a unit of product than is generally admitted to consideration under the valuation principle of rate making. Whenever valuation was considered by the Board it was as a test of the adequacy of a proposed rate and not as a basis for the determination of that rate. It would seem, furthermore, that the Board had escaped various pitfalls of the valuation rule64 by adopting original or book cost as the basis for value which, since the air carriers were young in years and had been required from the beginning to keep records on equipment costs, made this method of valuation practical. Consequently the problem of obscure data and lost records that plagued the railroads and older utilities was not a factor in this case. So the advantages of the original cost as a valuation method are retained; the share of the owners is assured "... in proportion to the service they perform in supplying the capital required . . ."

and the measure is more definite and less conjectural than other bases of valuation. 65

The essential difference is that in its use by the Board, the valuation principle is of secondary importance. The use of average unit costs as the basic rate factor, rather than a percentage return based on valuation, along with frequent re-examination of the cost situation, eliminates the difficulties arising from changes in the price level. Any change in the price level would so affect costs as to form the basis for a new level of rates.

A few new concepts or old concepts with a new application employed by the Board in this early period could well be emphasized:

(1) The principle of self sufficiency is a valuable contribution to the standards of industrial competency.

(2) Equally valid in its use was the theory of comparability which denied to the air carrier the possibility of a rate based on individual need.

(3) Reliance upon regulated competition between air carriers and with surface carriers was the outstanding characteristic of passenger rate control.

(4) In this early period there was no recognition of the part played by out-of-pocket costs and constant costs. The nature of the industry at that time more so than later, was such that fixed costs were not so large a part of the total costs as is found in the case of railroads and most of the public utilities, with the possible exception of the motor carriers. Later, with larger more costly equipment, these costs were to loom larger, but still not so great as those of the railroads.

(5) Common costs were disregarded due to the fact that at the time it was felt necessary only to ascertain total costs which were more than commercial revenue in order to determine the mail rate necessary to provide the required total revenue. Later, this problem was to become of major importance.

(6) The unit costs of providing the service made up the principal base for the rate, with the base then elaborated by various non-cost considerations to obtain a rate thought to be adequate for the purpose of the Act.

Among the cost factors included as relevant in this early period were the following items:

(1) Revenue collected by the Post Office Department.

(2) Original or book cost valuation; called by the Board, "required investment." This would be the same as has been called "prudent investment" in public utility rate making since the Board made a careful examination of the carrier records and made adjustments where it felt they were needed.

(3) Costing standards and techniques, such as the unit of measure, dependence on cost ratios, use of average costs, over-all and group costs, and the rejection of the allocation of joint costs.

65 Ibid., p. 124.
(4) Cost projection by estimates in future revenue-expense schedules.
(5) Measurement of the rate of return as a ratio of cents per revenue-mile, cents per pound-mile or cents per ton-mile and as a per cent of the required investment.
(6) Graduated decreasing returns for successive increments of service represented by the adoption of the block system of mail pay and later the incentive mail rate.
(7) The principle of alternative uses. When plane space is used for one purpose, it is sacrificed for other purposes. Hence the revenue from the latter should not be less than that to be gained from the use of the space for the primary use.

The non-cost factors considered by the Board in its rate making should also be mentioned, as the need to:

(1) develop an air transportation system;
(2) assist pioneering carriers;
(3) encourage technical improvements;
(4) develop a nation-wide system of airports;
(5) encourage competition as a stimulus to efficiency in management and a trend toward lower costs;
(6) consider operating rigidities imposed by air mail;
(7) promote desirable service patterns;
(8) permit load factors consistent with adequate service;
(9) provide service consistent with traffic density;
(10) gauge public psychology in promoting volume demand.

So the early method of mail rate making amounted to not much more than a cost-plus system, designed primarily to promote an air transport network.

**The Principle of Comparability**

The Board is required by the Act to consider economy and efficiency of management in setting mail rates, a difficult thing to do and one that has caused the agency to spend considerable time and thought in its efforts to conform. In unregulated business, economy and efficiency of management can be measured by the rate of profit resulting from the efforts of management, but this measure cannot be used by a regulatory agency where the profit is the direct resultant of the agency's rate making powers rather than stemming from the economy and efficiency of management.

One method used by the Board was to classify carriers into what it called "a homogeneous group for rate making purposes" and, taking the average costs for the group as a yardstick, setting a rate so that a carrier attaining the average unit costs of the group or less will enjoy the return which the Act terms fair and reasonable. The operating characteristics of the Big Four in 1950 were seen by the Board as sufficiently uniform to allow each carrier, under a uniform mail rate, to earn under conditions of economical and efficient management, a fair return.

The larger the number of carriers in a group used in this manner, the greater assurance there is that there will be enough good manage-
ment in the group to keep the average costs down. It is conceivable, however, that all of the carriers involved could be uneconomical, and inefficient and thus cause the failure of the principle of comparability. This principle should be supported by other means of judging the efficiency and the soundness of the practices used by the airline management. This the Board has done by looking carefully into the various cost items of the carriers and judging them upon various standards which have gradually been developed. For example, certain criteria have been set up for the amount of spare equipment a carrier should support; the amount of extra schedules it should operate; or the amount of general administrative expense it should be allowed as related to operating expense.

In connection with the Big Four rates in 1951 the Board explained why it would not allow United and TWA a return of more than 4.6 and 2.9 per cent respectively by pointing out certain ways that it felt that management had not been economical and efficient.

This method of carefully scrutinizing expenditures and refusing to underwrite with mail pay those which the Board believed to be unsound would probably be considered in an unregulated industry to be usurping of management prerogatives on the part of government. However, where public funds amounting to several million dollars annually are being paid out to promote an industry the safeguarding of the rights of the public alone would warrant such close supervision. As the air carriers reach the stage of self-sufficiency, however, the right of the Government to dictate to airline management should be lessened and only the control needed to assure good service at fair and reasonable cost to the public should be exercised. Since nine of the domestic carriers are now considered to be out of the "need" class, it is time that the law be changed to effect this reduction in supervision of management functions.

The Service Mail Rate

Each time that the Board faced the problem of setting a mail rate it felt forced to defend its use of the cost-of-service principle and explain its rejection of the value-of-service principle. In the quotation from the Interstate Commerce Commission which it used in support of its stand, it failed to use the entire applicable passage which fact weakens the Board's position and shows that its members were not fully aware of the full meaning of these two principles. What the ICC had said was:

As between the two cardinal principles of rate making—the cost of service and the value of the service—the first is decidedly more capable of exact determination and mathematical expression than the latter. If, as some would have us believe, no measure has yet been discovered for ascertaining the cost of the service, what measure is there suggesting anything definite and tangible and sufficiently practical in its application to carry conviction which can be applied to the value of the service? (the following was
omitted by the Board) By which, after all, we mean to say little more than that the cost of the service is ascertainable with much more precision and capable of more tangible expression than the value of service. Nevertheless, both cost and value must be considered as well as all other elements, entering into a rate.66

The CAB would have been on much safer ground had it been willing at the time to recognize the import of the last two sentences in the statement by the ICC and given some consideration to value of service. It is true that the ICC was dealing with commercial rates and that the situation was different when dealing with mail rates, still the value of the service cannot be ignored as did the Board in setting service mail rates. One result of this, as already noted, was to provide different rates for the same service which could only occur where the user of the service was not aware of the difference, or although aware of the difference, willing to pay different rates. Where the subsidy was hidden in the total mail payment as it was up to 1951 when the Board made its administrative separation, the amount of tax money used to pay for the services performed was not known and it was sound according to national policy to promote the carrier with the higher costs just as much as the carrier with the lower costs. But with a separation of subsidy and service mail pay, it became necessary to have a service rate that would provide the same pay for the same service regardless of the carrier performing that service.

Although faced with this new situation which really required a recognition of the influence of demand upon the mail rate, the Board was unwilling to acknowledge the importance of the value-of-service principle of rate making. Even though the Board, in the same decision evolved a two-part mail rate which would result in the same pay for the same service which amounted to a recognition of demand, there is no indication that the Board realized that it was giving weight to value of service in setting such a rate.

In determining the service rate based primarily upon costs, a sound approach was used. It must be remembered that between 1912 when the ICC made the statement quoted above and 1951 when the Board first started the use of cost allocation as a basis for a service mail rate, cost accounting and cost allocation techniques in the way of more complete and better records have progressed to such an extent as to make the use of cost data for rate making purposes much more practical. In fact the ICC has moved so far in the direction of basing rail freight rates upon cost that it has been criticized for bringing about too rigid a mathematical rate structure tied directly to costs.67 This has come about from the policy of attempting to base rail freight rates upon out-of-pocket costs plus the share of overhead costs that value of service conditions will permit to be allocated to that particular com-

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modity. The result has been to provide rates which are too rigidly related to distance.

The primary function of rates is to induce movement of traffic under conditions which will redound to the benefit, alike, of suppliers and purchasers of transportation. While this statement was applied to rail freight traffic, nevertheless it applies equally well to rates set for the movement of air mail traffic, since the purpose of airmail rates is to provide a fair and reasonable payment to the carrier and at the same time give the public a good service at a reasonable price.

The CAB should be given credit for devising a sound method of cost allocation which takes into consideration the different priority ratings of the various types of traffic and, although the Board Members might deny it, also considers demand to a certain extent. This was done by the difference in allocation of unused capacity costs which are common costs resulting from the requirement that some excess capacity must be available in order to properly serve the public.

In the Big Four mail rate determination in 1951 (which was in effect up to April 1, 1954) the Board classed mail and full-fare passenger traffic as primary, and express and freight as secondary traffic. This was done to compensate for the priority factor which means that express and freight are off-loaded when space is required for mail or passengers. It was noted in explaining this method of allocation that the secondary traffic was able to carry its own out-of-pocket costs and contribute something to common costs, but that it could not be expected to carry its full share of common costs.

Express and freight carried on combination flights reduce the amount of unused capacity and are accorded a second-class service being off-loaded where necessary to make room for primary traffic. The yields realized by the carriers from freight and express traffic are far below the revenue yield from first-class passengers and mail, and in the present stage of development they could not reasonably be expected to be carried on combination planes if such services were required to bear a full allocation of common costs. Yet these services are sold at a price substantially above their direct costs, and thus their retention is worthwhile in that they make a contribution to overhead, which reduces the cost of the primary services. . . . These classes of traffic share in the capacity costs only to the extent of the excess of revenues over these direct costs assigned to such traffic on the regular combination flights.

It is clear that the Board was using value of service considerations when it classified the traffic in this manner and allocated the unused capacity costs to the primary services because they resulted from scheduling to fit peak requirements of these services which peak requirements are brought about by variations in demand. It is evident that it is the nature of the demand for express and freight service which

68 Ibid.
AIR MAIL RATE MAKING

requires that the rates be such as to yield a revenue far below that of mail and first-class passenger traffic.

Three years later, changed conditions required a modification of the method just described, but there is still a recognition of the same principle to be seen. Here unused capacity costs were allocated to passenger, mail and express traffic on a weighted ton-mile basis with passenger and mail being assigned full weight and express half weight. Freight was not assigned any of the unused capacity costs on the combination services because of the fact that it moved entirely upon a space-available basis. In this latter case the Board felt that it should recognize the increasing importance of the all-cargo flights and so a separate allocation was made for these flights with total capacity costs being divided between freight and mail on a revenue ton-mile basis.

Here again the Board is recognizing value of service or demand in its influence upon the charges which can be made for the commercial services in considering the attainable revenue from these services relative to the rates that should be charged for the mail.

At no point does the Board seem to realize that the average unit costs upon which it bases its cost of the mail is dependent upon the volume of total traffic, both mail and non-mail, which means that the unit cost is dependent upon the commercial traffic which in turn depends upon demand. Now that the major part of the air transport industry is no longer dependent upon subsidy, the Board will have to face rate making problems for the non-mail services which will involve all of the factors of rate making including not only cost and value of service, but competition between carriers, places and commodities as well as all commercial and traffic considerations.

The two-part rate ordered by the Board is sound and it is well that such a rate is being put into effect. It has the obvious advantage of bringing about a mail rate which is the same for like services and also takes into consideration the terminal costs as a proper charge, separate from the line-haul costs. No mention was made of the tapering principle which was not used in setting this rate since the line-haul rate is to be made of a fixed amount multiplied by the mail ton-miles. In order to conform strictly to cost, a recognition of the distance traveled should be included in the rate, but that is partly recognized by the use of a terminal charge which includes the costs of landing and takeoff as well as those of loading and unloading. However, it is true that the actual flight costs are less per mile on a long flight than on a short one which would be recognized if the rate per mile were more on a short flight than on a longer one. The Board said in the Air Freight Rate Investigation that it was in agreement with the principle of scaling rates with distance of shipment and so recognized this principle in setting minimum freight rates. No mention of this principle appears in any of the mail rate decisions although it was mentioned in the recent passenger fare investigation.

70 9 CAB 341, 349 (1948).
71 CAB Docket No. 5509, (1952).
Perhaps the actual techniques used by the Board in its cost allocation might be questioned but that has not been gone into in detail and is not considered here. In general the principles of sound cost accounting techniques seem to have been followed with logical reasons for the allocations made. The determination to use 80 per cent of the total mail cost as the part assignable to the line-haul portion of the rate was arbitrary, but since the data used in this determination were not available, no judgment of this can be made here. The same holds true for the decision to use the revenue tons per station as the basis for classification of stations. The fact that a rate based on a piece basis instead of weight might have been more equitable has not been discussed, but is a possibility. Perhaps it would have been better if the terminal charge had been based on a minimum weight per piece in order to recognize this factor.

The uniform two-part mail rate formula set by the CAB to become effective September 1, 1955 has been approved by all parties concerned despite the wide divergence of opinions and suggestions presented at the hearings. The range of suggested rates was from a low of 21 cents to a high of over 60 cents per mail ton-mile. The Post Office Department suggested a rate between 23 and 26 cents, its criticism being that the Board's formula did not give proper weight to the relative difference in the amount of space occupied by the mail as compared to passengers nor to the weight of seats or other passenger equipment.

Various carrier representatives urged that a "value of service" concept be used which would produce a rate much higher than the formula decided upon.

The multi-element rate formula . . . constitutes a significant step forward from the group concept previously utilized. We are keenly aware, however, that costing of the mail involves to a large degree the exercise of informed judgment on our part, but we anticipate that over the years further refinements may be accomplished.72

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